

# Screening for Hepatocellular Carcinoma in the Northern Territory: The “Liver One-Stop Shop”

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## Background:

First Nations people in the Northern Territory (NT) face disproportionately high rates of hepatocellular carcinoma (HCC), largely due to chronic hepatitis B (CHB) infection. HCC rates among this population are six times higher than non-First Nations Australians, with significantly worse outcomes due to advanced-stage diagnoses. Early detection of HCC through biannual screening with ultrasound and AFP blood tests is crucial to improving outcomes. The “liver one-stop shop,” introduced by the NT Viral Hepatitis Service in 2010, seeks to address this disparity by delivering comprehensive CHB care, focusing on early HCC detection, directly to First Nations communities in remote regions of the NT.

## Methods:

A retrospective cohort study was conducted to evaluate the impact of the “liver one-stop shop” model on the early detection of HCC in remote communities from 2006-2019. Data was obtained from the NT Cancer Registry, clinical records, and hospital databases. HCC incidence rates were calculated and analysed by geographical location, ethnicity, and clinical characteristics, while survival rates were compared across three time periods: pre-implementation (2006-2009), development (2010-2014), and post-implementation (2015-2019) of the “liver one-stop shop”.

## Results:

The proportion of HCC cases diagnosed through screening increased from 41% to 68% among First Nations people. Tumour size at diagnosis decreased, and more patients were eligible for curative treatments. Despite a rising incidence of HCC, the survival rate improved over time, with significant benefits for those living in remote areas.

## Conclusion:

The “liver one-stop shop,” has significantly improved early HCC detection. Consequently, more patients were eligible for curative treatments, leading to improved survival rates. Expanding this accessible, community-based liver cancer screening model to more remote areas could further enhance HCC outcomes and reduce mortality for First Nations populations.

## Disclosure of Interest Statement:

The Authors of this work recognise the considerable contribution that industry partners make to professional and research activities. We also recognise the need for transparency of disclosure of potential conflicts of interest by acknowledging these relationships in publications and presentations. The Authors of this work have no conflicts of interest to declare. We also wish to thank the people living with viral hepatitis who participated in this research”.