

Significantly Lower hepatocellular carcinoma screening uptake in populations with low socio-economic profiles

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Background: Hepatocellular carcinoma (HCC) is preventable through screening in patients with Chronic Hepatitis B (CHB), and screening programs are therefore importantly endorsed by current guidelines. The estimated rate of adherence to HCC screening among eligible subjects in Victoria is 40%. Western Health (WH) is a tertiary hospital servicing a large proportion of culturally and linguistically diverse groups and people of lower socioeconomic status. We aimed to study the rate and factors predictive of HCC screening adherence outcomes in CHB this cohort.

Methods: This retrospective study analyzed patients diagnosed with CHB from January 2017-January 2019. Compliance was defined as attendance at 5 or more screening ultrasounds within this timeframe. Univariate and multivariate Cox regression were used to identify factors associated with adherence to screening. A patient survey was conducted to determine factors contributing to poor adherence.

Results: We identified 425 patients with CHB, of which 52.3% were male, and median age of 49 years. 47.6% were Asian born, with 40.9% of subjects being Vietnamese born. Only 9.4% were Australian born. 64% (n=272) were taking antiviral therapy for CHB. The rate of screening adherence was 32% with a mean of 3 ultrasounds attended of 6. Asian subjects had numerically, the highest rate of compliance (37%), whilst those born in Africa had the lowest rates of compliance (6%), $p < 0.06$. On multivariate analysis, factors significant for compliance to screening were age > 40 and active HBV treatment $p < 0.001$.

Conclusion: Our results demonstrate an unacceptably lower adherence rate of 32% compared to the rest of Victoria. 0.6% were born overseas, reflecting a CHB demographic with a proportionally high immigrant population. This population is culturally and linguistically diverse and requires attention in regard to screening resources and further studies to delineate where the gaps in our screening practices lie.

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Table: Univariate and multivariate analysis of variables associated with HCC screening uptake at Western Health

Variable	Univariate Analysis			Multivariable Analysis		
	aOR	95% CI	p	aOR	95% CI	
Sex n (%)						
Male						
Female	0.90	0.56-1.46	0.673	0.860	0.53 - 1.4	0.551
Age (years)median (IQR)						
Age Group n (%)						
Under 40						
40-49	6.30	2.54-15.56	<0.001	6.230	2.51 - 15.44	<0.001
50-59	10.84	4.50-26.15	<0.001	11.180	4.62 - 27.04	<0.001
Over 60	17.87	7.23-44.19	<0.001	19.280	7.7 - 48.26	<0.001
COB n (%)						
Asian						
Caucasian	0.49	0.20-1.20	0.117	0.500	0.2 - 1.22	0.126
Other	0.59	0.17-2.14	0.425	0.590	0.16 - 2.13	0.417
Mediterranean	0.37	0.11-1.18	0.93	0.380	0.12 - 1.19	0.095
African	0.21	0.05-0.99	0.48	0.230	0.49 - 1.06	0.059
FibroScan score n (%)						
F0-1				0.000	-	0.000
F2-4	1.05	0.31-1.40	0.271	1.050	0.31 - 1.38	0.268
No score	1.16	0.25-0.11	0.066	0.510	0.26 - 0.98	0.043
HBV treatment, n (%)						
No treatment				0.000	-	0.000
On treatment	3.37	1.98-5.74	<0.001	3.540	2.06 - 6.09	<0.001