

( $\geq 16.7$ ), but a KS  $> 50$  has a greater likelihood of HCC than KS  $> 30$  suggesting higher scores are associated with a greater risk of underlying HCC. KS could be incorporated into screening regimens for HCC in CHC infected patients.

**Competing interests** None.

**Keywords** cirrhosis, hepatitis C, hepatocellular carcinoma, screening.

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# CAN THE KING'S SCORE AND APRI BE USED TO IDENTIFY HEPATOCELLULAR CARCINOMA IN CHRONIC HEPATITIS C INFECTED PATIENTS?

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**Introduction** Hepatocellular carcinoma (HCC) is a recognised complication of chronic hepatitis C (CHC) cirrhosis. Currently, cirrhotic patients undergo HCC surveillance using 6 monthly liver ultrasound and serum  $\alpha$ -feta protein (AFP) measurement. Yet, up to 40% of HCC patients do not secrete AFP, limiting its utility as a screening tool. There is a need for further tests that identify patients with HCC. The King's score (KS) and AST-platelet ratio-index (APRI) have been validated to accurately predict cirrhosis in patients with CHC.

**Aim** To determine if KS and APRI have utility in identifying patients with HCC.

**Methods** A retrospective analysis of CHC patients managed at King's College Hospital, London between January 2000 and March 2007. The KS ((age  $\times$  aspartate aminotransferase  $\times$  international normalised ratio)/platelets) and APRI ((AST/ULN)/platelets  $\times 100$ ) were calculated. Patients with HCC were identified from the CHC database and the diagnostic accuracy of KS and APRI were assessed by area under the ROC curve (AUROC). An AUROC curve  $\geq 0.8$  implies that the test has clinical utility.

**Results** 702 patients were included in the analysis. 57/702 (8.1%) had HCC. 72.6% of documented genders were male. The genotype was available in 476 patients: Genotype 1 (51.1%), 2 (11.8%), 3 (29.2%), 4 (7.4%), 5 (0.5%) and 6 (0.2%). 204/699 (29.2%) had cirrhosis. The AUROC for predicting HCC for the King's score was 0.83 (95% CI 0.77 to 0.88,  $p < 0.0001$ ) and for the APRI 0.79 (95% CI 0.73 to 0.85,  $p < 0.0001$ ). A KS of 16.7 had the highest OR of 22.5 (95% CI 8.0 to 63.23) for prediction of HCC. A KS  $> 30$  and 50 had ORs for HCC detection of 7.7 (4.2 to 14.2) and 9.3 (5.2 to 16.9) respectively.

**Conclusion** The KS has clinical utility in identifying patients with HCC. The optimal cut off was the same as for cirrhosis