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## NAFLD AND THE CHANGING FACE OF HEPATOCELLULAR CANCER (HCC)

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**Introduction** The prevalence of cirrhosis attributable to NAFLD is rising and an increase in NAFLD related HCC is anticipated. The authors have explored the pervasiveness of NAFLD in their own patients with HCC.

**Methods** From 2003, all patients in North East UK have been referred to our tertiary centre and managed within a multi-disciplinary environment according to the EASL guidelines. Age, underlying liver disease, stage at diagnosis (ChildPugh/OKUDA/CLIP/BCLC) have been documented prospectively, as have modes of detection and diagnosis, treatments and outcomes.

Results This cohort includes 641 consecutive cases. Annual referrals increased fourfold during the study period and 10-fold compared to a cohort studied between 1995 and 2000. Presently, 16% have no evidence of underlying chronic liver disease, although features of the metabolic syndrome are common. This percentage has remained constant, reflecting an increase in actual numbers. In individuals with cirrhosis, NAFLD is now the commonest cause, accounting for 41%, versus ALD (30%); HCV/HBV (14%); PBC/autoimmune disease (7%); haemochromatosis (4%) and cryptogenic cirrhosis (4%). The age at presentation with HCC was significantly different between the aetiologies (71; 65 and 60 years for NAFLD, ALD and HCV respectively). In the last year, NAFLD HCC detected by surveillance has increased, but only accounted for 30% of cases (ALD 41%; HCV 75%). A third of NAFLD HCC were detected incidentally, while the remaining 40% presented symptomatically, with the diagnosis of NAFLD cirrhosis and HCC being made synchronously in individuals with a negative liver screen, little alcohol intake, with diagnostic clinical features of the metabolic syndrome and radiological and/or histological evidence of cirrhosis. Consequently, 43% of NAFLD HCC patients presented with BCLC stage D disease, compared to only 10-20% for other aetiologies. Survival reflecting the CLIP and BCLC staging systems was similar in the aetiological groups, regardless of the older age of NAFLD HCC patients.

**Conclusion** The increasing prevalence of the metabolic syndrome is associated with an increase in HCC, in both cirrhotic and non-cirrhotic patients. Patients with NAFLD cirrhosis related HCC have a poorer outcome, reflecting the advanced stage of their disease at presentation, rather than their increased age or comorbidity. The study strategies for surveillance fail this escalating population.

Competing interests None.

Keywords HCC, hepatocellular carcinoma, NAFLD.

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