Conclusion Our study provides genetic evidence that mechanisms underlying liver iron content are mostly systemic and not organ specific. The identification of loci which affect circulating iron traits provide genetic validation of the utility of MRI for a fast and non-invasive assessment of liver iron content.

Abstract Table 1 Genome wide susceptibility loci for MRI liver iron content reaching $P < 5 \times 10^{-8}$

SNP	Gene	Chr	Effect allele	EA	BETA	SE	P
rs1800562	[HFE]	6	A	0.076	0.41	0.029	5×10^{-42}
rs1799945	[HFE]	6	G	0.153	0.17	0.0216	8.2×10^{-15}
rs855791	[TMPRSS6]	22	G	0.563	0.11	0.0157	1.3×10^{-11}

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PTU-029 DECOMPENSATED CIRRHOSIS IS THE COMMONEST PRESENTATION FOR NAFLD PATIENTS UNDERGOING LIVER TRANSPLANT ASSESSMENT

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Introduction Non-alcoholic fatty liver disease (NAFLD) accounts for 15–20% of orthotopic liver transplants (OLT) in the United Kingdom. Index presentations with cirrhotic decompensation impact morbidity and mortality and represents

missed opportunities for preventive treatment leaving OLT or palliation as the only options. We aimed to determine the proportion of patients undergoing OLT assessment for NAFLD in whom the first presentation was an episode of cirrhotic decompensation by expanding upon our previous audit.

Methods Patient records were interrogated for all NAFLD patients undergoing assessment for OLT at the Royal Free London NHS Foundation Trust liver transplant unit between January 2003 and December 2017. Demographic, clinical, laboratory and outcome data were extracted. Those with an index presentation of jaundice, ascites, variceal bleeding, encephalopathy or HCC at presentation were classified as ‘decompensated’.

Results Data were available for 81 patients with NAFLD as the primary diagnosis. At first presentation to healthcare with chronic liver disease (CLD) 52 patients had decompensated cirrhosis while 29 had compensated cirrhosis. A decompensation event diagnosed in secondary care represented the first presentation with liver disease for 91.7% of patients compared to 52.6% referred from primary care. Cirrhosis was not suspected at the time of referral to hospital in 24.7% of patients subsequently assessed for OLT. OLT was performed in 43 patients. Thirty-one (72.1%) of these patients were decompensated at first presentation compared to 55.3% who were not transplanted. Four deaths occurred in OLT recipients within 6 months of transplantation, all of whom presented for the first time with decompensated cirrhosis. figure 1 illustrates the difference in survival between those patients who did and did not undergo OLT. Patients who underwent OLT had a significantly longer mean survival time of 9.81 years (95% CI 8.51–11.12) compared to those who did not undergo OLT 4.62 years (95% CI 3.35–5.89, $p < 0.001$).

Conclusions Most patients undergoing assessment for OLT for NAFLD had decompensated cirrhosis at their first diagnosis of CLD. These data underline the association between the late diagnosis of CLD in NAFLD with emergency hospitalisation and mortality and reinforce the necessity for greater awareness and earlier diagnosis of cirrhosis in NAFLD.

Abstract PTU-029 Figure 1 Survival Curve Analysis for patients who underwent OLT