Incidence of hepatic encephalopathy was similar across the studies (RR = 1.01, 95% CI = 0.70–1.46, p = 0.97).

Conclusion TIPSS is more effective in preventing variceal re-bleeding than EBL and medical management, without an increase adverse events. While this was not associated with a statistically significant improvement in survival, it is likely that these findings were underpowered. High quality, adequately powered and multi-centre randomized trials evaluating clinical and quality of life outcomes are required to verify these results and inform robust economic evaluations of TIPSS in the management of variceal bleeding in patients with cirrhosis.

P60 THE CREATION OF AN AUTOIMMUNE HEPATITIS REGISTER AND A NURSE-LED SERVICE: A WORTHY LOCK-DOWN PASTIME

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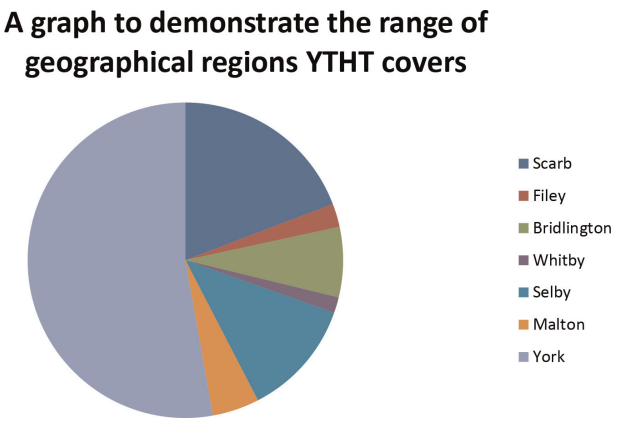
Introduction Autoimmune Hepatitis (AIH) is a relapsing chronic inflammatory condition[1] that waxes and wanes irrespective of outpatient clinic scheduling. York Teaching Hospital NHS Foundation Trust (YTHT) covers a wide geographical area.[2] The COVID-19 pandemic has demonstrated that not all patients require regular clinical review in person.

Aim To update the clinical registry of AIH patients within YTHT, ensuring appropriate monitoring during Covid-19, and prompt review for those requiring it.

Methods An IT-based search identified individuals' with a diagnosis of AIH within YTHT. An electronic note review established demographic details, risk factors for co-existing liver disease, severity of AIH, disease treatment, and current blood results.

Results 128 patients were identified, 81% of whom were female. The average age was 68 years (range 17–88). 51% were local to York Hospital and 34% closer to Scarborough Hospital, as demonstrated in figure 1. The remainder travel to their closest hub. 55% of the cohort had an elevated ALT suggesting ongoing disease activity (arguably ALT >31UI/L in males and ALT >21 UI/L in females). 62% were taking significant immunosuppression; Azathioprine 32%, Mycophenolate Mofetil 14.4%, Tacrolimus 9.6% and Prednisolone >20 mg/day 6.4%.



Abstract P60 Figure 1

Discussion The COVID-19 pandemic has demonstrated the need to identify and offer timely follow-up for our most unwell patients, allowing those with a stable condition to safely shield. Virtual monitoring of patients is important to identify asymptomatic flares. We advocate incorporating nurse-led monitoring of such patients, in combination with patient initiated follow-up for those with symptomatic disease.

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P61 TRANSCRIPTOMIC ANALYSIS OF ENDOTHELIUM FROM HUMAN HEPATOCELLULAR CARCINOMA HIGHLIGHTS ITS POTENTIAL TO SUPPRESS ANTI-TUMOUR IMMUNE RESPONSES

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Promising outcomes with recent immune checkpoint inhibitor trials in hepatocellular carcinoma (HCC) have encouraged the search for novel immunotherapies. The tumour microenvironment in hepatocellular carcinoma (HCC) is highly complex but aggressive tumours are characterised by the accumulation of immunosuppressive cell populations. The endothelium is described as the gatekeeper for immunity, however, the regulation of immune cell/endothelial interaction within HCC is poorly characterised. We aimed to increase our understanding of the biological processes taking place at the level of the tumour endothelium in HCC through RNA sequencing of the endothelium in isolation, comparing this to non-tumour endothelium. In addition, we further studied the tumour microenvironment by spatial transcriptomic analysis of whole HCC tissue sections.

Methods We undertook a validated technique for endothelial isolation using magnetic beads conjugated to Ulex agglutinin I, a lectin isolated from Ulex europaeus which binds specifically to the L-fucose residues present within glycoproteins on the surface of human endothelial cells. These beads were incubated with a single cell suspension of HCC tissue or distal non-tumour tissue. RNA was extracted and mRNA sequencing performed. We next analysed paraffin sections of resected HCCs with Nanostring® Digital Spatial Profiling (DSP) to provide further information on the localisation of immune signatures within the tumour microenvironment.

Results 5 paired tumour and distal non-tumour samples taken from patients who underwent surgical resection were analysed. 45 genes were identified as being significantly differentially expressed between the tumour and non-tumour endothelium (adjusted p value <0.05). 41 genes were upregulated in the tumour endothelium and 4 downregulated. Pathway analysis revealed 83 pathways that were down regulated (adjusted p value <0.05) and these were further grouped into 7 key clusters. Remarkably, these clusters were all related to immune related pathways: leucocyte mediated immunity; leucocyte mediated toxicity; leucocyte proliferation; cell killing;

exocytosis; cytokine production and cellular response to cytokine stimulus. DSP analysis provided additional spatial transcriptomic data, highlighting differential inflammatory signature expression between the tumour and tumour capsule.

Conclusion Our results demonstrate that the phenotype of tumour endothelium contributes to pathways which promote immune privilege in HCC. Spatial transcriptomics can provide further insight of how endothelial profiling correlates with immune cell infiltration in HCC. We have identified several new genes which need further validation but could be novel therapeutic targets that reprogramme the tumour endothelium and boost the efficacy of current immunotherapies.

P62 PROGNOSTIC VALUE AND POTENTIAL IMMUNOREGULATORY ROLE OF SCARF1 IN HEPATOCELLULAR CARCINOMA

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The immune microenvironment plays a key role in determining the pathogenesis and progression of hepatocellular carcinoma (HCC). Some immune cell subsets promote tumour growth whilst others drive anti-tumour responses. Elucidating the mechanisms by which distinct immune subsets are recruited to the HCC microenvironment could lead to novel immunotherapies. Immune cell recruitment follows a generalized stepwise process, termed the adhesion cascade. We have previously shown that liver endothelial cells express a number of atypical adhesion molecules, such as scavenger receptors, which contribute to immune cell selectivity within the adhesion cascade and thus shape the hepatic immune microenvironment. Scavenger receptor class F member 1 (SCARF1) is thought to play an important role in the selective recruitment of CD4+ T cells to liver sinusoidal endothelial cells during chronic liver disease; however, its contribution to the pathophysiology of hepatocellular carcinoma (HCC) is currently unknown. In this study, we investigated the expression of SCARF1 in HCC tumours and explored its potential role in the recruitment of CD4+ T cells to the tumour microenvironment.

Using TGCA (The Cancer Genome Atlas) RNA-sequencing datasets, we identified the downregulation of SCARF1 expression in HCC tumours, compared to non-tumourous tissues, and validated these findings with immunohistochemical staining of HCC resection specimens. We next explored the relationship of SCARF1 expression with tumour progression and found that a loss of SCARF1 expression was associated with aggressive tumour biology. Following this, we evaluated the prognostic value of SCARF1 expression in HCC tumours and demonstrated that high SCARF1 expression in HCC tumour tissues correlates with a better overall survival, disease-free survival and progression-free survival. Next, via a combination of TGCA data analysis and dual colour immunofluorescent staining, we confirmed that SCARF1 within HCC was largely associated with tumour endothelial cells. We then undertook flow-based recruitment assays under physiological levels of shear stress with primary liver-derived endothelial cells and purified CD4+ T cell subsets. We demonstrated that SCARF1 mediated a role in the specific recruitment of effector CD4+ T cells (CD4+CD25-) across liver endothelium, rather than immunosuppressive regulatory T cell subsets.

Our data suggests that endothelial SCARF1 expression in tumour biopsies may provide critical prognostic information and may potentially help in selecting HCC patients for immunotherapy trials. Regulating SCARF1 levels could itself be a novel immunotherapeutic approach that re-programmes the microenvironment of HCC tumours by promoting effector CD4+ T cell infiltration.

P63 'GET TESTED LEEDS': TESTING FOR HEPATITIS B, HEPATITIS C AND HIV IN AN URBAN EMERGENCY DEPARTMENT VIA NOTIONAL CONSENT

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Background Both Hepatitis B and C are underdiagnosed and Public Health England (PHE) estimates there are around 143,000 people living with Hepatitis C (HCV) in the UK, with around two thirds of these undiagnosed. In inner cities, the frequency of chronic Hepatitis B (HBV) infection is increasing because of migration from high prevalence areas. With this in mind and NHS England's plan to eliminate Hepatitis C within the decade, increased testing for the viruses is vital.

'Get Tested LeEDs' implemented blood borne virus (BBV) testing in the Emergency Department (ED) from October 2018 to March 2020.

Method Patients attending the ED aged between 16 and 65 and having U&Es taken were offered BBV testing via notional consent (posters and leaflets). HIV, Hepatitis B and Hepatitis C testing was done unless the patient declined or did not have capacity. Viral hepatitis testing included HCV antibody (HCV Ab) and HBV surface antigen (HBsAg). Positive HCV Ab had reflexed HCV RNA and confirmed HBsAg positive had a full serology panel. Positive results were electronically reported to specialist nurses and results given to patients face to face where possible.

Results (Data from Oct 2018 to July 2019) There was a total of 112,479 attendances, with 28,178 (25.1%) having U&Es taken. Of these, 16,053 (57%) had BBV testing. There were 345 HCV Ab positive cases (2.1%) of which 156 (1%) were HCV RNA positive (45% of HCV Ab positive were HCV RNA positive).

Of the HCV RNA positive cases, 76 were new diagnoses, 72 had been lost to follow up and 8 were currently in care. Of the 148 patients with a new diagnosis or lost to follow up, 51 patients so far (34%) have been commenced on treatment for Hepatitis C.

There were also 73 HBsAg positive cases of which 35 were new diagnoses, 34 were currently in care and 4 had been lost to follow up. 24 out of 35 patients with a new diagnosis (69%) were subsequently reviewed in a specialist clinic.

Conclusion The 'Get Tested LeEDs' initiative has shown that testing for BBV in the ED, alongside the traditional settings (hostels, prisons and substance misuse clinics), offers additional access to this cohort of the population. However, maintaining contact, adherence to regular follow up and treatment is often difficult in this population. Nevertheless, with recent advances in the treatment of viral hepatitis, every opportunity needs to be taken to identify and treat.