Expression of gut homing markers on T cells was quantified using flow cytometry.

Results Expression of GPR15 was significantly increased on CD4⁺ effector T cells (CD4⁺ CD127⁺ CD45RO⁺) in NAFLD, ALD and PSC patients compared to healthy controls (9.7 ± 0.4 , 12.7 ± 0.9 and 20.1 ± 1.8 vs 4.1 ± 1.8 , $P < 0.05$), with a significant increase also observed on CD8⁺ effector T cells (CD8⁺ CD45RO⁺) in PSC patients when compared to healthy controls (16.7 ± 2.6 vs 2.3 ± 0.58 , $P < 0.01$). There were also trends towards increased expression of gut homing markers CCR9, $\alpha 4\beta 7$ and $\alpha E\beta 7$ on effector CD4⁺ and CD8⁺ T cells in all chronic liver disease groups compared with healthy control tissue.

Conclusions For some time, evidence pointed towards $\beta 7$ integrins as the drivers of the hepatic inflammation seen in patients with AILD and associated inflammatory bowel disease as a result of aberrant effector T cells homing from the gut to the liver. These data reveal a somewhat redundant role for $\beta 7$ integrins, which could be regarded as a non-disease specific feature of advanced disease, and highlight GPR15 as the primary mediator of effector gut T cell homing.

PTU-011 DIET/LIFESTYLE MANAGEMENT OF NON-ALCOHOLIC FATTY LIVER DISEASE: A SURVEY OF BRITISH SOCIETY OF GASTROENTEROLOGY MEMBERS

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Introduction NAFLD is the most common liver disease in the UK. Diet/lifestyle modification to induce weight loss and disease regression is the optimum treatment and is recommended by NICE and EASL guidelines. The aim of this survey was to evaluate the current status of diet/lifestyle care for patients with NAFLD in the UK.

Methods To gather data on current practice and perceived barriers to the effective delivery of diet/lifestyle intervention for patients with NAFLD, BSG members were invited to undertake an online survey between 28th January and 11th February 2019.

Results 50 clinicians responded (16 Gastroenterologists, 21 Hepatologists, 11 Specialist Trainees, 2 other; 56% from DGHs and 44% hepatology centre; mean age 43.1 years (range 29–66), 72% male, representing all regions except Northern Ireland. 48% of responders had no post-registration training in weight management nutrition. Recording of patient's weight, BMI and alcohol intake was routine practice (100%, 84% and 92% respectively). Routine recording of dietary intake and physical activity was reported by only 22% and 26% respectively. 62% of respondents referred less than 30% of NAFLD patients for lifestyle intervention. Key barriers preventing referrals were no commissioned services (50%), uncertainty about referral routes (44%) and limited resources for additional dietetic input (34%). Lifestyle advice routinely delivered by responders included: the impact of weight status on NAFLD outcomes (88%); exploration of weight and dieting history (52%); weight loss, diet and physical activity goals (50%) and signposting (50%) in very brief or brief interventions (52% vs. 38%). Perceived obstacles to providing lifestyle advice were short consultation time/work overload (86%) and inadequate training in lifestyle and behaviour change

counselling (58%). Dietary approaches prescribed by either the responders or other healthcare professionals were face-to-face (88%) and based on the EatWell Guide (82%).

Conclusions The survey highlights considerable variability in the delivery of diet/lifestyle management for NAFLD in the UK. Access to weight management services appears limited in many areas. Amongst gastroenterologists, there is a clear need to improve training in delivering diet/lifestyle interventions given the high prevalence of obesity and NAFLD. This would support effective care delivery.

PTU-012 IDENTIFYING DIFFERENCES IN MANAGEMENT OF PBC TO INFORM FUTURE PRACTICES -RESULTS FROM ALL-WALES TRAINEE COLLABORATIVE

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Introduction Primary biliary cholangitis (PBC) is a chronic autoimmune liver disease, which can progress to end-stage biliary cirrhosis. Risk stratification and assessment of response to treatment is important to target care and identify patients who may benefit from newer treatments to improve prognosis.

We studied the clinical practice of patients with PBC across Wales, a geographically diverse region of over 3 million.

Methods A clinical audit tool was developed with UK-PBC and EASL guidelines. Data was retrospectively collected by specialist trainees in each health board. This included the use of ursodeoxycholic acid (UDCA), its appropriate dosing and assessment of response. The prevalence of cirrhosis and identification of high risk patients was also assessed.

Results A total of 406 patients with a diagnosis of PBC were identified across five Welsh health boards. Of these, the majority were female (73%). Mean age at diagnosis was 59.7 years (± 13.5). Serological testing for PBC (AMA $> 1/40$) was present in 88.5% at time of diagnosis. Mean Alkaline Phosphatase (ALP) at diagnosis was 334U/L (56–2020). Mean follow-up since diagnosis was 7.9 ± 6 years.

Of 214 patients with recent clinic letters, 179 (83.6%) were on UDCA. Across health boards this ranged from 67.9% to 91.5%. Patients managed by hepatologists were more likely to be on the appropriate dose of UDCA (92.9%) compared to gastroenterologists (39.3%), $p = 0.018$. Assessment of response to UDCA at 1 year was 59.3%. This was performed more frequently by hepatologists (86.8%) than gastroenterologists (62.5%), $p = 0.024$.

47.8% of patients had cirrhosis. 18.4% of patients were identified as high risk as defined by a bilirubin $> 50 \mu\text{mol/L}$ or dropping albumin. Of 82 patients with clinic letters documenting a conversation about transplant, 26 patients were considered with 12 patients undergoing liver transplant.

Conclusions This study provides valuable insight into the care of PBC patients across Wales. It serves to highlight the wide variation and discrepancies in adherence to standards between hepatology and gastroenterology managed patients, despite widely available guidelines. In particular, patients

managed by hepatologists were more likely to receive optimal UDCA dosing and have response documented at 1 year. This has important implications on accessing newer therapies. These findings will be used to review the PBC care pathway in Wales to improve adherence to standards and improve patient care

PTU-013 TRANSIENT ELASTOGRAPHY (TE): A SCREENING TOOL FOR CHRONIC LIVER DISEASE IN PRIMARY CARE (PC)

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Introduction Liver disease is the third leading cause of premature death in England and Wales and is the only major causes of death on the rise. Half of all diagnoses of chronic liver disease are made when patients present to the Emergency Department with decompensated liver disease, and this late presentation incurs a poor prognosis. There has been a push to identify asymptomatic patients with advanced liver fibrosis early to prevent progression to decompensated cirrhosis (NG50 Cirrhosis in over 16s: assessment and management. NICE 2016).

TE is increasingly used to screen for advanced fibrosis in patients with risk factors for liver disease for early detection and referral to secondary care (SC)(Harman et al, Direct targeting of risk factors significantly increases the detection of liver cirrhosis in primary care: a cross-sectional diagnostic study utilising transient elastography. *BMJ Open* 2015). In this study, a hepatology specialist nurse (HSN) provided an outreach service to identify those with advanced fibrosis who would benefit from referral to SC.

Methods We carried out a prospective study with high risk patients undergoing TE by a HSN in four general practices in West Berkshire.

Risk factors prompting referral for TE include type 2 diabetes mellitus, obesity and excess alcohol use. Referral to SC was advised in those with a TE score >10 kPa. Patients were given lifestyle advice and signposted to appropriate community services (eg drug and alcohol services, eat well services, etc). Data was analysed for rate of detection of significant fibrosis and subsequent diagnosis of advanced liver disease.

Results 476 patients, over a 27 month period, with one or more risk factors were identified. 455 underwent TE. 85 (18%) had a TE score >10 kPa, prompting referral to SC. 72 (16%) were seen in a hepatology clinic for further assessment and management. 5 had thrombocytopenia, and 13 had splenomegaly sonographically. 28 (6.2%) underwent a Gastroscopy for variceal surveillance, of which 3 had portal hypertensive gastropathy and 3 had gastro-oesophageal varices. There were 13 (2.9%) newly diagnosed with cirrhosis, 1 with chronic HCV infection, 1 with autoimmune hepatitis, and 1 with a neuroendocrine tumour.

Conclusions 3.5% of patients with one or more risk factors for liver disease screened with TE were found to have significant liver disease and 2.9% were cirrhotic on further assessment. This highlights the role for TE in PC to identify high risk patients who would not have otherwise presented to SC until they had progressed to decompensated liver disease. TE is a useful screening test and the majority of patients tested could be managed with advice and lifestyle modification in

the community, reserving SC resources for those with higher risk of significant liver disease.

PTU-014 DOES ADHERENCE TO THE BSG ENDORSED DECOMPENSATED CIRRHOSIS CARE BUNDLE IMPROVE PATIENT OUTCOMES?

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Introduction A BSG-endorsed care bundle for the management of decompensated cirrhosis in the first 24 hours of admission has been implemented in the North East of England resulting in improved management of these patients; however in this study patient outcomes were not followed up and there have been no subsequent published studies of its use.^{1,2} In our expanding hepatology unit of a small tertiary hospital in Brisbane, Australia we reviewed inpatient management of decompensated cirrhotic patients to assess morbidity, mortality and if adherence to the care bundle improves patient outcomes.

Methods We retrospectively reviewed patient notes for hospital admissions due to decompensated cirrhosis between 1/6/16 – 1/6/17. Admissions were scored according to care bundle adherence and divided into tertiles. Mortality, rates of readmission and inpatient length of stay (LOS) were compared between the most adherent and least adherent groups using Fisher's exact test with p values < 0.05 considered significant.

Results 59 admissions were reviewed consisting of 39 patients (69% male, median age 60 years) with a median MELD 19. Only Child-Pugh B (33/59, 56%) and C (26/59, 44%) patients were included. The most adherent group had numerically lower 1-year mortality (5/16, 31%) than the least adherent group (7/15, 47%, p=0.4725). Readmission rates within 1 year were reduced in the most adherent group (6/17, 35%) compared to the least adherent group (8/16, 50%), though not statistically significant (p=0.4905). Readmission rates at 30 days and 6 months were also reduced with care bundle adherence however again were not statistically significant. There was no effect on the length of hospital stay between groups.

Abstract PTU-014 Table 1 – Table showing 1-year mortality, readmission and LOS between groups

	All admissions	Least adherent	Most adherent
Total admissions	59	16	17
Patients	39	15	16
1-year mortality	11 (28%)	7 (47%)	5 (31%)
Readmission within 30 days	10 (17%)	3 (19%)	2 (12%)
Readmission within 6 months	26 (44%)	6 (38%)	5 (29%)
Readmission within 1 year	29 (49%)	8 (50%)	6 (35%)
Median LOS, days (range)	4 (1–54)	4 (1–23)	4 (2–20)
Median MELD (range)	19 (8–30)	19 (10–30)	19 (10–30)
Median creatinine (range)	68 (35–627)	75 (40–273)	65 (46–627)

Conclusions Our results suggest reduced mortality and hospital readmission in patients more closely adherent to the BSG care bundle, however this difference did not reach statistical significance. Reasons for this include a small sample size which limited statistical power and that overall adherence to the care