inclusion criteria. Patients were included if they had an increased BMI (≥ 30 or ≥ 27.5 in high risk ethnicities) or waist circumference (>94 cm men or >90 cm men high risk ethnicities and >80 cm women) and low alcohol intake (<28 units/week males or <21 units/week females). AST/ALT ratio, Fibrosis-4-score (FIB-4) and NAFLD score were calculated for each patient. Those with an increased fibrosis score were reviewed in outpatients and had further investigations; non-invasive liver screen, liver ultrasound scan and liver elastography.

Results Out of the 82 included patients, 64 (78%) had at least one increased fibrosis score. Twenty-six patients with raised fibrosis score/s were reviewed in outpatient clinic and were offered further investigations. Of 15 patients who had an US scan 10 (66%) had fatty liver and the rest were normal. Twenty-one patients had liver elastography and 1 was found to have possible fibrosis with a fibrosis score of 8.1 kPa. Subsequent liver histology showed fibrosis, however it was thought to be drug induced.

Conclusions Informal feedback from the staff performing the NHS Health Check indicated that incorporating the liver screen was not burdensome. However, based on these Results simple fibrosis markers are not a useful screening test for use in primary care, as the high false positive rate Resulted in too many unnecessary referrals to secondary care to exclude fibrosis. It remains unclear how patients with liver fibrosis can be easily identified in primary care.

PWE-078 SPONTANEOUS BACTERIAL PERITONITIS PROPHYLAXIS: ARE WE FOLLOWING GUIDELINES?

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Introduction Spontaneous bacterial peritonitis (SBP) is the most common serious infection in patients with cirrhosis, occurring in 25% of those who develop ascites. It is associated with significant morbidity and mortality rates of 20%–40%.¹ British Society of Gastroenterology (BSG) and National Institute of Clinical Excellence (NICE) guidelines recommend long-term prophylaxis (LTP) with Ciprofloxacin or Norfloxacin in patients with cirrhosis who have low ascitic fluid protein concentration (<15 g/L) with or without prior episode of SBP (primary LTP) or who have had an episode of spontaneous bacterial peritonitis (secondary LTP).^{1 2}

Methods We carried out a retrospective observational study using our electronic system for admissions with a diagnosis of ascites and cirrhosis across the East Kent Hospitals NHS Foundation Trust from April 2014 to April 2017. Ascitic fluid analysis Results were reviewed against discharge summaries to audit whether LTP was started according to national guidelines.

Results 337 cases of ascites with cirrhosis were identified (93 female: 244 male) with a median age of 58 (range 30–92 years). 61 out of 337 cases had a current or previous diagnosis of SBP. 5 out of 61 died during their admission. 10 out of 61 were discharged on secondary LTP and 46 patients were discharged without LTP. 11 out of 337 cases had low ascitic fluid protein with no current or previous episodes of SBP. None of these patients were discharged with primary LTP.

Conclusions East Kent Trusts followed national guidelines in starting secondary LTP for SBP in 18% (10 out of possible 56) of cases and 0% of cases requiring primary LTP from April 2014 to April 2017. This low adherence rate may reflect lack of clinician awareness of guidelines for prescribing LTP for SBP in patients with ascites. There may also be a relation to local microbiology guidelines not following BSG or NICE guidelines on initiation of primary or secondary LTP for SBP. This study serves as a reminder to clinicians to carefully consider LTP in patients with ascites secondary to cirrhosis on each admission. We also recommend that trusts review local microbiology guidelines to ensure it adheres to national guidelines.

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PWE-079 DIAGNOSTIC UTILITY OF AUTOIMMUNE SEROLOGY PROFILING

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Introduction Immunoserologic investigation is of clinical use in the discrimination of liver disease of autoimmune aetiology from alternate causes. We sought to investigate the diagnostic utility of immune serology in patients investigated for liver disease.

Method We analysed the immunoprofile of patients investigated for liver disease at a tertiary centre between 2001 and 2017. We compared Results for patients clinically coded with a diagnosis of autoimmune hepatitis (AIH), primary biliary cholangitis (PBC), or primary sclerosing cholangitis (PSC) against those without, amongst patients investigated by our liver services. Overlap features (o/l) were included if clinically documented.

Results We evaluated Results from 2874 patients. Patients with AIH (n=556; incl. o/l (19.3%)) were predominantly female (3 F: 1 M), with a bimodal age distribution at presentation (≈ 18 , 62 years). Antinuclear (ANA) and smooth muscle antibodies (SMA) were both sensitive (92.3%, 86.6% respectively) for a diagnosis of AIH, but poorly specific (23.6%, 27.2%). Amongst patients with T₁AIH, 39 patients had antibodies to soluble liver antigen (SLA). Of these, 36 (92%) had concordance to Ro-52 antibodies. 2.3% of patients with AIH had T₂AIH, defined by antibodies to liver-kidney microsome-1 (LKM); of the 13 patients, 4 had SMA and 8 have ANA reactivity. Patients with PBC (n=527; incl. o/l (18.3%)) were primarily female (9 F: 1 M), and in their 6th decade (mean=56 years). Anti-mitochondrial antibody (AMA) testing was both sensitive (70.6%) and specific (91.2%). In patients who were AMA negative at testing, anti-glycoprotein 210 (gp210) (sens 40.7%, spec 95%) and anti-SP100 (sens 40.3%, spec 96.3%) proved useful diagnostic adjuncts. Patients with PSC (n=291; incl. o/l (10.1%)) were predominantly male (3

M: 2 F) with a bimodal age distribution at presentation (≈ 25 , 58 years). Perinuclear anti neutrophil cytoplasmic antibody was seemingly specific for PSC (93.9%), as compared to non-auto-immune liver patients, and found in 23.3% of patients.

To differentiate between PSC and AIH, anti-SLA, -LC1, -Ro-52, ds-DNA and f-actin all had a PPV $>95\%$ for AIH; $>85\%$ in patients who were negative for SMA. Similarly, to distinguish PBC from PSC, AMA, anti Ro-52, -gp210 and -SP100 all have a PPV $>90\%$ for PBC; this was also true for anti-Ro52 and -SP100 in patients who were AMA-negative.

Conclusion The optimal use of immunoserology requires careful evaluation of test parameters in the population served by a liver disease programme.

PWE-080 CHANGE IN BILIRUBIN WITH OBETICHOIC ACID IN PRIMARY BILIARY CHOLANGITIS PATIENTS WITH HIGH BASELINE BILIRUBIN

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Introduction In patients with primary biliary cholangitis (PBC), bilirubin (BILI) is a recognised marker of disease progression and a strong predictor of survival. Recently, the Global PBC Study Group reported risk with elevated BILI extends into the normal range with a cutoff of $0.67 \times \text{ULN}$ identifying patients at risk. Obeticholic acid (OCA) is indicated for treatment of PBC in patients with inadequate response or intolerance to ursodeoxycholic acid. This retrospective analysis aimed to evaluate the effect of OCA on BILI in this patient subpopulation.

Methods OCA has been evaluated in patients with PBC in one 12 month (mo) Phase 3 double-blind (DB) placebo (PBO)-controlled trial (POISE) and two 3-mo Phase 2 PBO-controlled trials (201 and 202). Patients were eligible to continue treatment in open-label extensions (OLE) with all patients receiving OCA. Patients from the Phase 2 and 3 trials with baseline (BL) total BILI (TBILI) $\geq 0.67 \times \text{ULN}$ were evaluated for change in TBILI over 12 mo in the following manner: 1) DB comparison of OCA vs PBO at 12 mo in POISE and 2) DB +OLE OCA use totaling 1 year of treatment (POISE randomised to PBO, evaluated at 12 mo OLE; Phase 2 randomised to OCA for 3 mo, evaluated at 9 mo OLE; and Phase 2 randomised to PBO, evaluated at 12 mo OLE).

Results The analysis included patients with TBILI $\geq 0.67 \times \text{ULN}$ at their OCA BL: POISE, $n=51$; 201, $n=7$; and 202, $n=7$. In patients with BL TBILI $\geq 0.67 \times \text{ULN}$, TBILI increased after 12 mo of PBO treatment, and decreased after 12 mo of OCA (table 1). In the DB phase of POISE, of the 7 PBO and 9 OCA patients with abnormal TBILI at BL, 14% of PBO and 78% of OCA patients attained normal TBILI levels after 12 mo. Further, of 10 PBO and 20 OCA patients with normal TBILI at BL, 60% of PBO and 15% of OCA patients worsened to abnormal TBILI after 12 mo.

Conclusions Patients treated with OCA had a trend toward reduction of TBILI compared with those treated with PBO. These data suggest that OCA may reduce progression of patients with more advanced liver disease.

Abstract PWE-080 Table 1

12 Mo Treatment	PBO	OCA			
Phase	DB		OLE		
Study	POISE		201	202	POISE
Dose (mg)	-	5–10	10	10 or 50	10, 25, or 50
n	17	15	14	7	7
Mean (SD) change from BL in	2.6	−3.3	−4.0	−8.1	−10.1
TBILI ($\mu\text{mol/L}$)	(6.5)	(3.6)	(7.8)	(6.4)	(8.1)

OCA BL- OCA-randomised patients: if time from last DB visit to first OLE visit ≤ 30 days, mean of evaluations prior to first DB dose is used; if >30 days, last assessment prior to first dose in OLE is used; the initial OLE visit is included as a BL evaluation

- PBO-randomised patients: last assessment prior to first dose in OLE is used; initial OLE visit is included as a baseline evaluation

PWE-081 EARLY CHANGE IN ORGAN FAILURE SCORES PREDICTS SURVIVAL IN ACUTE ON CHRONIC LIVER FAILURE

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Introduction Identification of patients with acute-on-chronic liver failure (ACLF) who will benefit from ongoing support on intensive care unit (ICU) remains a challenge. There is no agreed marker of futility or time-point. There has been recent consensus regarding the definition of ACLF grades, and chronic liver failure-sequential organ failure assessment (CLIF-SOFA) score has been adopted. We aimed to determine if evolution in CLIF-SOFA or other markers of disease severity can predict mortality and survival in ACLF patients admitted to ICU.

Methods Prospectively recorded data was collected on 48 ACLF patients admitted to ICU at Guy's and St Thomas' hospital, a tertiary non-transplant centre, from May 2013 – May 2016. Scores were calculated at D0, D2, D5, D7.

Results The majority were male ($n=34,700.8\%$), mean age was 57.4 ± 10.3 years and major aetiologies were ALD ($n=34,700.8\%$) and viral hepatitis ($n=11,290.2\%$). The major indication for ICU admission was infection ($n=29,600.4\%$). Mean Child-Pugh (CP) score on admission to ICU was 12 ± 2 and the mean MELD 24 ± 9 . Mortality at 7, 28 and 90 days was 16/48 (33.3%), 30/48 (62.5%), 36/48 (75%).

The best predictive model proved to be difference in CLIF-SOFA ('delta C-SOFA') scores between D2 and D5 or D7. Mean delta C-SOFA D2-D5 was -2.25 ± 1.9 and mean delta C-SOFA D2-D7 was -3.36 ± 2 for survivors compared to 0.19 ± 1.73 ($p < 0.001$) and 0 ± 2.58 ($p = 0.001$) for deceased at 90 days, with area under curve (AUC) of 0.839 and 0.835, respectively.

The mean survival time (days) for patients with improvement in delta C-SOFA between D2 and D5/D7 was 837 ± 144 and 814 ± 149 vs patients with worsening or static scores 33.8 ± 14.5 ($p < 0.001$) and 37.6 ± 18 ($p < 0.001$). The negative predictive value at D5 and D7 was 95.5% and 94.1%, respectively.

Other prognostic scores at a single time point on D7 predicted survival at D28 and D90 with AUC of: CP (0.75/0.67),