a scale from 3 to 21 using the Brief Illness Perception Questionnaire. Deprivation based on postcode area was expressed as percentile rank. For each one point increase in Anxiety, Depression and Emotional Illness Perception scores the likelihood of Poor Acceptance increased by 22%, 21% and 27% respectively. Greater deprivation increased the likelihood of Poor Acceptance by 2% per percentile rank.

**Conclusion** Predictors of Poor Acceptance may be grouped into Mood and Deprivation. Education through self-management programmes may tackle some of the problems caused by deprivation. To optimise treatment success in IBD, we would advocate further research into a mood-oriented approach using screening tools, coupled with clinical judgement and targeted psychological interventions such as Acceptance and Commitment Therapy (ACT), which is based upon Acceptance and Adjustment Theory.

**Disclosure of Interest** None Declared.

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**PWE-112**

**MATERNAL OBESITY PROMOTES OFFSPRING NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD) THROUGH DISRUPTION OF ENDOPLASMIC RETICULUM HOMEOSTASIS**

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1: J Soeda, 1 A Mouralidaran, 1 S Ray, 1 R Carter, 1 G Fusai, 1 M Novelli, 1 J Pombo, 1 A Bocianowska, 1 D Sugden, 1 L Poston, 1 P Taylor, 1 J Oben. 1 Institute of Liver & Digestive Health, University College London; 1 Gastroenterology, Guy’s & St Thomas’ Hospitals; 2 Hepatology Surgery & Liver Transplantation, Royal Free Hospital; 3 Department of Pathology, University College London; 4 Division of Women’s Health, King’s College London, London, UK

**Introduction** We have previously shown that maternal obesity (MO) programmes offspring obesity and consequent liver disease (non-alcoholic fatty liver disease, NAFLD) but involved mechanisms are unclear. Accumulating evidence suggests endoplasmic reticulum (ER) stress induced unfolded protein response (UPR) plays a central role in the pathogenesis of steatosis and subsequent non-alcoholic steatohepatitis (NASH). However, little is known about the role of UPR in developmentally programmed NAFLD.

**Methods** C57BL6 mice were fed standard or obesogenic diet (OD) for 6 weeks prior to pregnancy and throughout pregnancy and lactation. Litters were weaned onto standard or OD to produce 4 groups. Animals were sacrificed at 6 months. Blood and tissue samples were collected to assess the liver phenotype and expression analysis of UPR related proteins and genes.

**Results** Offspring exposed to MO and a post-weaning OD (OffOb-OD) developed profound NAFLD compared to those exposed to post-partum (OffCon-OD) or the control group (OffCon-SC), as assessed by raised ALT (p < 0.001) and NAFLD Activity Score (p < 0.01). Among 3 proximal sensors of ER stress, PERK protein expression and phospho elf-2alpha were specifically increased in OffOb-OD (p < 0.05). ATF6 cleavage and spliced form of XBP-1 were observed in all groups except for OffCon-SC. Phopho SAPK/JNK, CHOP, and LC3BI protein expression were significantly increased in OffOb-OD. Furthermore, hepatocytes apoptosis as detected by TUNEL and active capase-3 staining in OffOb-OD. These results indicate that unresolved UPR is significantly activated in OffCon-OD. However, GRP78, a major ER chaperone and central regulator for ER stress, was significantly downregulated in OffOb-OD. Developmentally programmed offspring UPR is involved in developmentally programmed NAFLD.

**Conclusion** MO and a post-natal obesogenic diet profoundly disrupted ER homeostasis in offspring. Disrupted ER homeostasis may be involved in the propagation of NAFLD.

**Disclosure of Interest** None Declared.

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**PWE-113**

**LOW RISK FOR HEPATOCELLULAR CANCER (HCC) IN HEPATITIS B VIRUS (HBV) INFECTED ASIAN MIGRANTS: IMPLICATIONS FOR CANCER SURVEILLANCE**

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1: K-K Li, 1 S Von Heimendahl, 1 T Bruns, 1 S Ward, 1 P Trivedi, 1 Y Do, 1 D Mutimer. 1 Centre for Liver Research & NIHR Biomedical Research Unit, University of Birmingham; 2 Liver Unit, Queen Elizabeth Hospital, Birmingham, UK

**Introduction** Hepatitis B virus (HBV) associated with hepatocellular carcinoma (HCC) but low risk may lead to underdiagnosis.

**Methods** We collected personal details, lifestyle and HBV status for 200 HBV infected migrants from Hong Kong for 10 years. HBsAg and HBsAb were tested annually using Abbott Axsym HBsAg and Axsym HbcAb kits. Determinants of HCC were assessed by survival analysis.

**Results** 193 (96.5%) patients were male; 94 (47%) patients were born in Hong Kong, with 82 (41.0%) patients born in the UK.

**Conclusion** The prevalence of HBV infection and the incidence of HCC are low and may be explained by lifestyle. There was an absence of HCC even in low risk Asian migrants.

**Disclosure of Interest** None Declared.
Introduction The global incidence of HCC is rising and it is the third most common cause of cancer-related death worldwide. Surveillance of at-risk patients has been recommended by expert guidelines to detect early cancers that are amenable to curative treatments. AASLD has recommended HCC surveillance for non-cirrhotic HBV-positive Asian males over 40 and females over 50yrs of age. However, the evidence to support this recommendation is limited and is derived from studies conducted in Asia. Results from such studies may not be applicable in the West, due to differences in environmental risk factors and availability of HBV treatment. Implementation of such a recommendation would place a burden on healthcare resources, and may not be justified if the risk for HCC is substantially lower than previous estimates in this population.

Methods A retrospective study was carried out of all Asian patients undergoing follow up for HBV infection from 1990 to 2012. Patients were classified as cirrhotic or non-cirrhotic according to clinical, biochemical, radiological and histological results. Follow-up was until September 2012, and was censored at time of death, development of cirrhosis or loss to follow-up.

Results Among 316 identified Asian patients with HBV, 73 non-cirrhotic patients fulfilled the proposed AASLD surveillance criteria, either at time of initial referral or during the period of follow-up. The median at-risk follow up period (as defined by AASLD guidelines for non-cirrhotic Asians) was 57 months (range: 0–354 months). HCC was diagnosed in one non-cirrhotic patient after 77 months of follow up (male, 60yrs), two patients became cirrhotic after 49 and 89 months (male, age 46 and 55yrs) and no deaths occurred. The overall incidence of HCC in the non-cirrhotic cohort meeting the AASLD surveillance criteria was 1 per 429.5 patient-years of follow-up (0.23% per patient-year).

Conclusion The incidence of HCC in Asian patients with non-cirrhotic HBV is low in our cohort. This low incidence challenges the rationale for surveillance in this group of patients. More studies are needed to assess the benefit of such approach.

Disclosure of Interest None Declared.

PWE-115 ALPHA-FETOPROTEIN MEASUREMENT IN THE DIAGNOSIS OF HEPATOCELLULAR CARCINOMA IN REAL-LIFE PRACTICE: A MULTI-CENTRE, RETROSPECTIVE ANALYSIS

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1 K Wright, 2 E Harrod, 3 G Webb, 4 J Collier, 5 D Gorard, 6 A Evans. 1 Gastroenterology, John Radcliffe Hospital, Oxford, 2 Gastroenterology, Royal Berkshire Hospital, Reading, 3 Gastroenterology, High Wycombe Hospital, High Wycombe, UK

Introduction In hepatocellular carcinoma (HCC), earlier diagnosis simproves outcome but the optimum method of surveillance in high-risk groups is controversial. Recent AASLD and EASL guidelines[1,2] have recommended six-monthly ultrasound surveillance (US) alone. British guidelines[3] currently recommend combining serial alpha-fetoprotein (aFP) measurements with six-monthly US. This study aimed to assess the role of aFP measurement in HCC surveillance programmes.

Methods This large retrospective multicentre study assessed newly diagnosed HCC over a 5-year period (2006–2011) at three centres: two general hospitals and one tertiary referral centre. Electronic and multi-disciplinary team data were reviewed.

Results 111 patients with a confirmed diagnosis of HCC were identified. Of these, 91 (81.9%) were male and the median age was 69 years (range 24–87). 52 (46.8%) patients with newly diagnosed HCC had established liver disease prior to diagnosis. Of these, 21 (40.4%) were participating in combined US-aFP surveillance, 2 (3.8%) US alone and 1 (1.9%) aFP alone. A diagnosis of HCC was confirmed by liver biopsy in 43 (38.7%), CT in 41 (36.9%), MRI in 25 (22.5%) and US combined with elevated aFP in 21 (18%).

At diagnosis, aFP was elevated in 81 (73.0%), normal in 22 (19.8%) and unmeasured in 8 (7.2%) patients. Of those 21 diagnosed in an established surveillance programme of six-monthly US and aFP, 17 (81.0%) showed a rise in aFP. When assessing the trigger for confirmatory cross-sectional imaging ± biopsy across all data, a solely elevated aFP prompted further investigation in 11 (9.9%); in those under surveillance, this number was 7 (29.2%) with no abnormality detected on US within the preceding three-month period in 6 (26.7%) of these.

Conclusion These results demonstrate that a significant number of patients would have had a delayed diagnosis of HCC if aFP measurement was removed from UK screening programmes. Potential contributing factors limiting the success of US- based screening programmes include: small lesion size, sonographer error, patient factors limiting USS accuracy (e.g. body habitus) and irregular attendance for USS. This study supports continued