Methods In this study, 129 patients with varying degrees of liver fibrosis and 223 controls without liver fibrosis were recruited. Further 41 patients with no liver, but kidney fibrosis were also included to evaluate interference with expressions of kidney fibrosis. Urinary low molecular weight proteome was then analysed by capillary electrophoresis coupled to mass spectrometry (CE-MS).

Results CE-MS identified 50 urinary peptides associated with liver fibrosis. When combined into a classifier, LivFib-50, it separated liver fibrosis from controls with an area under the curve (AUC) of 0.95 (95% CI: 0.90–0.98, p<0.0001) with 83.5% sensitivity and 95.1% specificity (figure 1). In the first validation cohort, LivFib-50 demonstrated an AUC of 0.94 (95% CI: 0.89–0.97, p<0.0001). In a second validation cohort, LivFib-50 was adjusted for age and demonstrated an AUC of 0.91 (95% CI: 0.76 -0.98, p<0.0001). Age-adjusted LivFib-50 showed 84.2% sensitivity (95% CI: 60.4 – 96.6) and 82.4% specificity (95% CI: 56.6 – 96.2) for detection of liver fibrosis. The sequence-identified peptides were mainly fragments of collagen chains, uromodulin and Na/K-transporting ATPase subunit γ. We also identified ten putative proteolytic cleavage sites; eight were specific for matrix metallopeptidases and two for cathepsins.

Conclusions Profiling of urinary peptides in liver fibrosis offers potential diagnostic markers. The discovered proteolytic sites could enhance our knowledge about the pathophysiology of liver fibrosis.

P9 EVALUATING THE PERSPECTIVES OF TRAINEES ON THE HEPATOLOGY TRAINING PATHWAY

[1]Meha Bhuva*, [2]Oliver Tavabie, [2]Jeremy Nayagam, [2]Mussarat Rahim, [3]Michael FitzPatrick, [1]William Griffiths, [1]Victoria Katherine Snowdon. *[1]Addenbrooke's Hospital, Cambridge, UK; [2]King's College Hospital, UK; [3]Translational Gastroenterology Unit, University of Oxford, UK*

10.1136/gutjnl-2020-BASL.20

Background Obtaining a CCT (Certificate of Completion of Training) in Hepatology requires 24 months of dedicated Hepatology training. The non-academic pathway includes an advanced training program (ATP) year which is nationally competitive (17 posts) and often geographically challenging. Shape of Training will enforce a reduction in Gastroenterology training to 4 years requiring trainees to make earlier and more restrictive career decisions (e.g. dropping colonoscopy), and demands training program designers to provide sufficient timely training opportunities while meeting workforce requirements. Of note, the number of Hepatologists nationally is insufficient. With respect to Hepatology training, we sought to gauge the opinions of ST3/4 Gastroenterology trainees to help inform program design.

Methodology Quantitative and qualitative data was collected using anonymised questionnaires which were completed by trainees attending the BSG-led 'Introduction to Gastroenterology Day 2019' with subsequent framework analysis of qualitative data.

Results 44 trainees completed the questionnaire and 32 (73%) are considering a career in Hepatology (5 'definitely', 17 'probably', 10 'maybe'). Reasons include: positive clinical experiences, Hepatology patients and disease pathogenesis, and personal circumstances (mainly geographical).

5/32 (16%) aim to work in a Level 3 centre, 15/32 (47%) in a level 2 centre, 3/32 (9%) in a district general hospital (DGH) with the remainder undecided. Of note (considering the whole dataset), 5/44 (11%) are unsure if there is a transplant centre in their deanery. 10/32 (31%) would be able to move and 7/32 (22%) would want to move for an ATP.

16/32 (50%) trainees considering Hepatology favour current national allocation, regarding it as a fair process. The remaining 16/32 (50%) favour local allocation largely due to availability of level 2/3 centres in their deanery.

Of the 22 trainees who are 'probably' or 'definitely' considering Hepatology, 12/22 (55%) are willing to drop colonoscopy training (including 4/5 (80%) who are 'definitely' considering Hepatology).

Discussion Our results suggest that a significant proportion of early trainees are interested in a career in Hepatology providing reassurance regarding any potential increase in ATPs. Furthermore, outcomes regarding dropping colonoscopy (as necessitated by a shorter training program) are reassuring. Trainees are less interested in DGH Hepatology which is concerning as this is where the need is (Lancet Commission 2019). National ATP allocation is generally supported but would benefit from greater post coverage geographically. Providing trainees with salient information early- ideally prior to commencing specialty training- will facilitate decision making (including choosing or moving deaneries) to permit successful career planning.

P10 LIVER IRON CONCENTRATION DETERMINED BY MAGNETIC RESONANCE IMAGING IS SUPERIOR TO SERUM FERRITIN IN HAEMOCHROMATOSIS

Meha Bhuva*, Ilse Paterson, Edmund Godfrey, David Bowden, William JH Griffiths. *Addenbrooke's Hospital, Cambridge, UK*

10.1136/gutjnl-2020-BASL.21

Background Venesection is the standard treatment for hereditary haemochromatosis (HH) preventing morbidity and mortality, but therapeutic venesection may not be clinically beneficial in all patients. Furthermore, serum ferritin may not accurately reflect the true extent of iron overload. To inform practice we correlated magnetic resonance (MR) iron quantification data in a cohort investigated for HH.

Methods A cross-sectional study of 93 hyperferritinaemic subjects without known liver or haematological disease was undertaken. All subjects underwent HFE genotyping and MR imaging with hepatic iron quantification. Serum ferritin and transferrin saturation values were time-matched with MR liver iron concentration (LIC). For those patients undergoing venesection, volume of blood removed was calculated as a measure of iron overload.

Results The cohort comprised 45 C282Y homozygotes, 23 compound heterozygotes (C282Y/H63D) and 25 who were either C282Y heterozygotes or wild-type for HFE. Of 45 C282Y homozygotes (20 females, 25 males, mean age 60), serum ferritin ranged 184–4523 mcg/l (mean 1027 mcg/l), transferrin saturation 43–100% (mean 81%), and LIC 1.27–9.97 mg/g (mean 5.06 mg/g). Removing the two homozygotes with ferritin >3000 mcg/l, there was a moderately positive correlation between ferritin and LIC in homozygotes (r=0.48).

Of 23 compound heterozygotes (5 females, 18 males, mean age 55), serum ferritin ranged 418–3016 mcg/l (mean 1033 mcg/l), transferrin saturation 29%-100% (mean 51%) and LIC 1.36–4.58 mg/g (mean 2.43 mg/g). Serum ferritin of >1000