

## Alkaline Results

1 compound (X) was significantly more abundant in pancreatic cancer compared to lung cancer ( $p=0.020$ ) and also vs controls ( $p=0.045$ ).

**Conclusion** This small pilot study is proof of concept indicating that urinary VOCs have potential as biomarkers for pancreatic cancer. 2 compounds (A&B) in pancreatic cancer are raised compared to lung cancer and healthy controls when urine is acidified and another (X) under alkaline conditions, of these 1 compound (A) remains raised after corrections of multiple comparison. Further work is required to develop urinary VOCs as biomarkers for pancreatic cancer.

**P253** **FIRST UK REAL-WORD DATA ON PATIENTS WITH CARCINOID SYNDROME ON LONG-TERM TELOTRISTAT THERAPY**

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**Introduction** Telotristat ethyl is a tryptophan hydroxylase inhibitor, effective against symptoms of carcinoid syndrome refractory to standard somatostatin analogue therapy by directly inhibiting serotonin production. While clinical trials have established short-term efficacy of the drug, we report the first exploratory study of 15 patients with metastatic neuroendocrine tumours (NET) on long-term telotristat (median duration=8 months). This is a novel EMA-approved treatment, not yet approved by NICE guidelines. Patients received telotristat via a compassionate use programme. The primary outcome of this study was to determine biochemical and symptomatic improvement after initiating telotristat. The secondary outcome was to define the demographic of patients at King's College Hospital typically started on telotristat therapy.

**Methods** We performed a retrospective chart-review study of 15 patients diagnosed with metastatic small bowel NET with symptoms of carcinoid syndrome. Medical notes and clinic letters were reviewed for patient-reported symptoms, biochemical marker levels and imaging results. Stratified analysis was performed using the Wilcoxon sign-rank test.

**Results** All 15 patients initiated on telotristat, had a small bowel primary NET with metastatic disease (15 liver, 5 bone, 2 peritoneum). 8 patients had carcinoid heart disease, 7 having had previous valve surgery. 12 patients had completed Peptide Receptor Radionuclide Therapy prior to initiating telotristat and 4 patients had Selective Internal Radiation Therapy prior to initiating telotristat. All patients were taking somatostatin analogue therapy. All patients showed significant reduction in urinary 5-HIAA (median percentage change 57.14%,  $p = 0.001$ ). There was no significant change in chromogranin A or B. Of the 6 patients taking telotristat for at least 1-year, urinary 5-HIAA still remained significantly lower after 1-year (median percentage change 55.8%,  $p = 0.028$ ). Moreover, 9 patients reported improvement in diarrhoea, 5 reported improvement in cutaneous flushing, 4 reported weight stability. 4 patients reported side effects including abdominal pain and constipation. Only 2 patients showed progression of disease on imaging during the follow-up period.

**Conclusion** This is the first UK data on real-world use of this novel agent for carcinoid syndrome. While telotristat is

currently only licensed for diarrhoea, patients on long-term telotristat also report improvement in flushing and weight loss, as well as significant persistent improvement in urinary 5-HIAA.

**P254** **ARE WE STILL MISSING CASES OF PANCREATIC EXOCRINE INSUFFICIENCY AND PANCREATIC ATROPHY IN DIABETES MELLITUS?**

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**Introduction** There is increasing evidence of coexistence of exocrine dysfunction in patients with diabetes mellitus (DM). Patients with pancreatic exocrine insufficiency (PEI) are at risk of malabsorption and malnutrition. In Leeds et al review there was a significant improvement of gastrointestinal symptoms and reduction of frequency of hypoglycaemia when treated with pancreatic enzyme replacement therapy (PERT). Our aim was to study the current practice and yield of PEI in DM patients tested with faecal elastase-1 (FEL-1).

**Methods** Consecutive recruitment of DM patients attending diabetes outpatient clinic in a tertiary centre. FEL-1 <200µg/g considered PEI. Age, BMI, smoking history, alcohol intake, and duration of disease were collected. Those with PEI were followed up in our gastroenterology clinic.

**Results** 64 patients with DM were approached. Final analysis included 49 patients (DM1=21, DM2=28) who returned stool sample, median age 62 years, 27male (55.1%). Ten patients (20.4%) had low FEL-1 (DM1=5, DM2=5). Six out of 10 (60%) with low FEL-1 had morphological changes in the pancreas (chronic pancreatitis=1, pancreatic atrophy=5). Most patients did not have GI symptoms ( $n=8$ ) apart from diarrhoea( $n=1$ ) and bloating ( $n=1$ ). PEI patients had median BMI within overweight category (28.5 kg/m<sup>2</sup>) compared to (30.3 kg/m<sup>2</sup>) in normal FEL-1 group. Pack-year smoking history was higher in PEI group although didn't reach significance, 20 vs 12.5,  $p=0.7$ . There was no difference in duration of disease between the two groups.

**Conclusions** Majority of our DM patients were asymptomatic however there was high prevalence of PEI and pancreatic atrophy. We expect higher prevalence of PEI in symptomatic DM patients attending gastroenterology clinic. Therefore, increased awareness and prompt screening can improve the diagnosis of PEI. Follow up study will be conducted to assess the impact of treatment on quality of life.

**P255** **DIETARY NIACIN INTAKE IS INVERSELY ASSOCIATED WITH THE DEVELOPMENT OF GALLSTONES: A PROSPECTIVE COHORT STUDY**

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**Introduction** Dietary niacin may prevent gallstones, a major cause of acute pancreatitis (AP), by increasing plasma high density lipoprotein and lowering triglycerides, both associated