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"It has been a great pleasure to welcome friends and the GI community to our record-breaking congress in Barcelona.

UEG Week is a truly iconic international meeting. With this year's delegates attending from 122 countries, the congress continues to attract people from all corners of the globe.

For the first time, over 4,000 abstracts were submitted to UEG Week. This reaffirms how this congress offers the premier platform for learning and for researchers to submit and present their latest findings in digestive health.

It was also the first time in our history that we had more than 4,000 attendees at the Postgraduate Teaching Programme, which provided two days of excellent Continuing Medical Education and profound updates on the latest developments in GI and hepatology topics.

I believe we generated a hugely exciting programme and sincerely hope that attendees engaged in stimulating debates and enjoyed the latest science.

On behalf of UEG, I would like to thank everyone who contributed to the congress and thoroughly look forward to welcoming everyone to Amsterdam next year."

Herbert Tilg Chair of the UEG Scientific Committee

ueg week in numbers

Attendance



PARTICIPATING COUNTRIES

4,050

POSTGRADUATE TEACHING PROGRAMME ATTENDEES

479

ALLIED HEALTHCARE PROFESSIONALS & NURSES

MENTORING PROGRAMME PARTICIPANTS

MEMBERS

Sessions & Abstracts



222 SCIENTIFIC SESSIONS



1,065

LECTURES



2,618

PRESENTED ABSTRACTS



4,021

SUBMITTED ABSTRACTS

Industry



143 EXHIBITING & SPONSORING COMPANIES



iiii 2,387 EXHIBITORS

Media



LIVE STREAMED



RECORDED SESSIONS



4,269 ایند

LIVE STREAM

Social



2,159 SOCIAL WALL POSTS



9,745 APP DOWNLOADS



24,687

SOCIAL MEDIA

Top Abstract Prizes

The exceptional quality of scientific investigation from five European research teams was recognised at this year's UEG Week, with each team being awarded a Top Abstract Prize of €10,000 to advance their work. The prize-winning studies were selected based on their scientific merit, and cover a range of clinical and basic science topics, including the treatment of Crohn's disease and irritable bowel syndrome, cancer risk in primary sclerosing cholangitis, and mechanisms of liver regeneration after injury. All studies will be published in the UEG Journal.

Lissy de Ridder: Top-down treatment more effective than step-up treatment in children with newly-diagnosed Crohn's disease

Children with newly-diagnosed moderate-to-severe Crohn's disease (CD) achieve higher rates of clinical remission and mucosal healing with early initiation of anti-TNF treatment than those receiving guideline-recommended step-up treatment, according to the results of the first randomised controlled study (TISKids1) to compare these two treatment strategies in this population. The award-winning study, which involved collaborators across the Netherlands, Finland, and Croatia, randomised 100 children aged 3-17 years with newly diagnosed untreated luminal CD (weighted paediatric CD activity index [wPCDAI] >40) to receive either IFX 5 mg/day (weeks 0, 2, 6, 14, and 22) combined with azathioprine (AZA) 2-3 mg/kg, with AZA continued as maintenance treatment up to 52 weeks (top-down treatment) or induction therapy with exclusive enteral nutrition (EEN) or oral prednisolone combined with AZA 2-3 mg/kg as maintenance therapy (step-up treatment). In both groups, treatment could be intensified (start or restart corticosteroids, start or restart biologic, or intensify IFX) in the event of a primary non-response at Week 6 or secondary loss of response. The primary endpoint of the study was clinical remission (wPCDAI <12.5) at Week 52 without additional CD-related treatment or surgery. Mucosal healing rates were assessed at Week 10 using calprotectin levels and endoscopy.





According to Lissy de Ridder from Sophia Children's Hospital in Rotterdam, the Netherlands, who presented the study results, the two treatment groups were well matched at baseline, with 50 children in the top-down group (median age 15.0 years [interquartile range (IQR) 11.7-16.6 years]; median wPCDAI 55.0 [IQR 45.0-65.0]) and 47 in the step-up group (median age 15.0 years [IQR 12.0-16.3 years]; median wPCDAI 57.5 [IQR 47.5-67.5]). At Week 52, 49% of the study participants achieved clinical remission in the top-down treatment group compared with 11% of the step-up group (p<0.001). Endoscopic remission (SES-CD <3) at Week 10 was achieved in 61% of the topdown group compared with 14% of the step-up group (p<0.001). Inflammatory markers were all significantly lower at Week 10, and significantly fewer children had required treatment intensification by Week 52 in the top-down group compared with the step-up group (p<0.001). At Week 52, 62% of the children in the step-up group were receiving an anti-TNF treatment compared with just 30% of the topdown group (p=0.007).

"It is time to change our daily clinical practice," said Lissy de Ridder. "In children and adolescents with newly-diagnosed luminal moderate-to-severe Crohn's disease, we should really start with an anti-TNF from disease onset."

Watch a video interview with Lissy de Ridder

William Waddingham: Clonal diversity may predict progression to gastric cancer in chronic gastritis

Researchers in the UK and Japan have shed new light on the molecular origins of gastric cancer, suggesting that early metaplastic changes arise in a single stem cell and that clonal diversity within the metaplastic tissues may help predict progression to gastric cancer in individuals with chronic gastritis. In their award-winning research, investigators set out to better understand how gastric intestinal metaplasia (GIM) originates and evolves, and to evaluate its molecular diversity in the chronically-inflamed stomach. In order to do so, the team developed a novel workflow to visualise and trace the clonal initiation of GIM in 'normal' tissue harvested from 16 individuals with cancer who underwent gastrectomy compared with 16 who underwent bariatric surgery for weight loss.

En face analysis of 'normal' gastric mucosa from the cancer patients revealed a microscopic mosaic patchwork of islands of GIM. Serial sectioning studies and 3D reconstruction subsequently demonstrated that GIM originates from a single stem cell within a single gastric gland, with metaplastic lineages expanding within the gastric gland before rapidly colonising singular glandular units. Quantification of the clonal expansion of the metaplastic lineages in vivo demonstrated that expansion occurred within a gland through 'neutral drift'. Patch size dynamics of neutral clonal markers in chronically inflamed gastric mucosa revealed a marked increase in clonal expansion rate compared to non-inflamed mucosa; analysis of GIM demonstrated that the rate was increased further by an order of magnitude. "So in other words, what we are seeing is that intestinal metaplasia expansion is driven by inflammation," explained William Waddingham from University College London Cancer Institute in the UK, who presented the team's research findings.



To investigate the clonal diversity of intestinal metaplasia, the researchers used laser capture microdissection to excise individual glands from individual clones before performing next-generation and whole genome sequencing on the extracted DNA, enabling the reconstruction of phylogenetic trees. Every patch of metaplasia was found to have a unique repertoire of somatic mutations, suggesting that each patch has its own distinct evolutionary lineage. Based on their findings, the investigators have concluded that individual patches of IM originate from a single clonally-expanded stem cell and that each patch is genetically distinct from its neighbour. "We believe that clonal diversity could be a marker for predicting future cancer risk," concluded William Waddingham.

Magdy El-Salhy: FMT using a 'super-donor' effective and well tolerated in irritable bowel syndrome



A randomized, double-blind, placebo-controlled study has found that faecal microbiota transplantation (FMT) using a single, well-defined 'super-donor' with a normal dysbiosis index (DI) and favourable microbial signature can produce high rates of clinical response and marked symptom improvements in patients with irritable bowel syndrome (IBS). The study randomized 164 individuals with IBS and moderate-to-severe symptoms (IBS Symptom Severity Scoring System [IBS-SSS] ≥175) to receive either a placebo solution containing 30g of their own faeces (n=55), a 30g donor transplant solution (n=54), or a 60g donor transplant solution (n=55). The transplant material was administered through the working channel of a gastroduodenoscope into the distal duodenum. The primary efficacy endpoint of the study was the percentage of participants who achieved a ≥50-point reduction in IBS-SSS total score at 3 months after FMT (response to treatment).

At 3 months, response to FMT treatment was observed in 23.6% of individuals who received placebo, 76.9% of individuals who received a 30g transplant, and 89.1% of individuals who received a 60g transplant. Significant differences between both FMT groups and the placebo group were observed at Week 2, Month 1, and Month 3; differences between the two FMT groups were also significant at these timepoints. Clinically significant symptom improvement (a ≥175-point reduction in IBS-SSS) occurred at 3 months in 5.5%, 35.2%, and 47.3% of individuals in the placebo, FMT 30g and FMT 60g treatment groups, respectively. Significant improvements in fatigue (Fatigue Assessment Scale) and quality of life (IBS-Quality of Life instrument) were also reported in the FMT treatment groups compared with the placebo group at Month 3. An analysis of faecal bacterial profiles showed that the responders in both FMT groups had higher signals for Eubacterium biforme, Lactobacillus spp, and Alistipes spp, and lower signals for Bacteroides spp after treatment compared with baseline. FMT was generally well tolerated, with mild abdominal pain, diarrhoea, and/or constipation occurring in approximately 20% of FMT recipients during the first 2 days after the procedure.

"FMT is an effective treatment for patients with IBS," said lead investigator, Magdy El-Salhy from Haukeland University Hospital in Bergen, Norway, pointing out that the response to FMT increased with dose. However, "a well-defined donor with normal DI and favourable specific microbial signature is essential for the success of FMT."



Aiva Lundberg Båve: Primary sclerosing cholangitis increases the risk of hepatobiliary, colorectal and pancreatic cancer

A large Swedish cohort study has confirmed previous findings that primary sclerosing cholangitis (PSC) increases the risk of hepatobiliary, colorectal, and pancreatic cancers, but has also shown for the first time that the risk of several other cancers is also increased. The awardwinning study conducted by researchers at Karolinska University Hospital and Institute in Stockholm, which looked at the risk of all cancer types in the PSC population, identified 1,442 individuals with PSC and compared them with more than 14,000 matched controls. The study cohort was linked to national patient, cancer, and cause of death registries, enabling complete long-term follow-up for outcomes. Individuals with PSC were followed from the date of diagnosis until either their first cancer diagnosis, liver transplantation, emigration, or death.

After a mean follow-up of 15.4 years, the overall risk of receiving any first cancer diagnosis was increased almost four-fold (HR 3.7 [95% CI 3.2-4.2) among the PSC cohort compared with the controls. The risk of hepatobiliary cancer (cholangiocarcinoma, hepatocellular cancer, and gallbladder cancer) was markedly increased among those with PSC (HR 117 [95% CI 67.9-201.7); the risk of colorectal cancer (HR 6.5 [95% CI 4.8-8.9]) and pancreatic cancer (6.6 [95% CI 2.5-17.8]) also increased substantially. "What hasn't been shown before, but we saw in our cohort, was an increased risk of ventricular cancer, with a 4.4-times higher risk (HR 4.4 [95% CI 1.6-12.4])," said Aiva Båve from the Karolinska Institute, who presented the study findings. "For the first time we also saw an increased risk of lymphoma, with a 2.4-times higher risk for PSC (HR 2.4 [95% CI 1.2-4.9])."

In an effort to interpret the team's findings, Aiva Lundberg Bave pointed to potential confounding factors that could not be adjusted or matched for in the study, including the use of immunomodulators among the patients with PSC, which, she said is currently being investigated.

"So in conclusion, we could confirm in our large cohort study of more than 1.400 patients with PSC in Sweden that the risk of hepatobiliary and colorectal cancer is increased. We could also validate the suggested increased risk of pancreatic cancer, and, for the first time, we also showed an increased risk of ventricular cancer and lymphoma. These findings of course need to be studied in larger cohorts."

Watch a video interview with Aiva Lundberg Båve





Yang Wang: CRGP signalling via RAMP-1 promotes liver regeneration through YAP protein induction

Scientists from Germany who have been investigating the mechanisms underlying liver regeneration after injury have suggested that calcitonin gene-related peptide (CGRP) signalling via receptor activity modifying protein 1 (RAMP-1) may be responsible for the remarkable ability of the liver to regenerate after hepatocyte loss. Yang Wang from the Technical University of Munich presented the team's award-winning studies, beginning his presentation by reminding delegates that the liver is innovated by sensory nerves containing the neuropeptide, CGRP, which binds to RAMP-1 on hepatocyte membranes.

To investigate how CGRP plays a role in liver regeneration, Yang and his co-workers used two mouse models to emulate acute liver injury and chronic fibrosis. Acute liver injury induced by partial hepatectomy and chronic fibrosis induced by carbon tetrachloride (CCI4) injection resulted in a sustained upregulation of hepatic CGRP mRNA and a late increase in RAMP-1 expression. The absence of RAMP-1 in the knock-out mice after acute liver injury led to a delayed recovery of liver tissue, a reduction in hepatocyte proliferation, and a reduction in cell cycle progression compared with the wild-type mice. In the liver fibrosis model, compared to the wild-type mice, the knock-out mice

showed significantly impaired collagen fibre deposition and hepatic stellate cell activation, as well as reduced hepatocyte proliferation and cell cycle progression.

After investigating the mechanisms further, the researchers also reported that expression of YAP was decreased in the livers of RAMP-1-deficient mice after both types of liver injury. RAMP-1 deficiency impaired nuclear localization of YAP protein in hepatocytes and upregulation of YAP target genes in regenerating livers. Phosphorylation of YAP and the YAP kinases, LATS1/2 and MOB1, was found to be elevated in RAMP-1-deficient livers in both models. Stimulation of primary hepatocytes or precision-cut liver slices with CGRP demonstrated that CGRP/RAMP-1 signalling positively regulated YAP activity. "So when CGRP binds to the [RAMP-1] receptor, the kinases are inhibited, YAP protein is activated, it goes into the cell nucleus, and leads to hepatocyte proliferation as well as stellate cell activation," concluded Yang Wang.

Watch a video interview with Yang Wang

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Scientific Programme Highlights



Vedolizumab reduces risk of serious adverse events and infections compared with anti-TNF agents

A large 'real-world' study involving more than 1,000 people with inflammatory bowel disease (IBD) receiving a biologic for the first time has reported that vedolizumab, significantly reduces the risk of serious adverse events (SAEs) and serious infections (SIs) compared with anti-TNF treatment. The EVOLVE study, which was a retrospective chart review study involving sites in Canada, Greece and the USA, enrolled biologic-naïve adults with ulcerative colitis (UC) or Crohn's disease (CD) who were initiated on vedolizumab (n=598) or an anti-TNF agent (n=497) between May 2014 and March 2018. Serious adverse events and SIs (defined as either life-threatening, requiring hospital admission, resulting in significant disability/incapacity, or recorded as an important medical event) were evaluated.

Compared with the anti-TNF cohort, the vedolizumab cohort was older, contained more men, and had a longer disease duration. The median (range) follow-up was 15.3 (3.0-47.0) months in the vedolizumab treatment group and 16.3 (3.5-51.0) months in the anti-TNF group.

Incidence rates for the first occurrence of SAEs (per 100 person-years) in the total group were significantly lower in the vedolizumab group (4.6 [95% CI 3.5-6.8]) compared with the anti-TNF group (10.3 [95% CI 9.5-14.9]). Incidence rates for the first occurrence of SIs were also significantly lower with vedolizumab (1.4 [95% CI 0.8-2.5]) than with anti-TNF treatment (2.6 [95% CI 1.4-4.3]). The unadjusted hazard ratios, which favoured vedolizumab, were 0.42 (95% CI 0.27-0.66) for SAEs and 0.34 (95% CI 0.16-0.71) for SIs. Similar trends were observed when the data were stratified by UC and CD separately.

"This is one of the first large cohort studies looking at bio-naive patients starting vedolizumab and anti-TNF and attempting to compare outcomes," said Andres Yarur from the Medical College of Wisconsin, Milwaukee, USA, who presented the study results. "These data support a favourable safety profile of vedolizumab in biologicnaïve patients with inflammatory bowel disease in real-world clinical practice."

Primary resistance of H. pylori to key antibiotics rises again across Europe

A pan-European study involving 19 countries has provided concerning evidence that primary resistance of Helicobacter pylori (H. pylori) to front-line antibiotics continues to rise, with steady increases in resistance to clarithromycin and levofloxacin over the past 10 years. The latest point prevalence study conducted between March 2018 and January 2019, which updates resistance data gathered in 19981 and 2008-2009², was presented at UEG Week 2019 by Francis Mégraud from the Pellegrin Hospital in Bordeaux, France.

As part of the study, 24 centres in 18 countries were asked to collect 50-100 strains from treatment-naive H. pylori-positive adults. Antimicrobial testing was performed using standardised testing methods. Data from 1232 individuals were included in the analysis. H. pylori primary resistance rates in the latest study were found to be 21.6% for clarithromycin, 16.3% for levofloxacin, and 39.1% for metronidazole compared with rates in 19981 and 2008-20092 of 9.9% and 17.5% for clarithromycin, not tested and 14.1% for levofloxacin, and 33.1% and 34.9% for metronidazole, respectively. Primary resistance rates varied widely by country in the latest study, with resistance to clarithromycin ranging from 36.9% in Southern Italy to 5.0% in Denmark, and resistance to levofloxacin ranging from 29.2% in Southern Italy to 0.0% in Denmark.

"There is a continuous rise in H. pylori primary resistance to clarithromycin in Europe and a slight increase of resistance to levofloxacin," said Francis Mégraud. "Resistance to amoxicillin, tetracycline and rifampin remains currently quite low in Europe. Metronidazole resistance is almost constantly high but its clinical impact is limited."

Single-capsule bismuth therapy yields high rates of H. pylori eradication in clinical practice

A single capsule containing bismuth salts, metronidazole, and tetracycline (Pylera®), administered with a proton pump inhibitor (PPI), has been shown to be an effective and well tolerated treatment for H. pylori infection in study involving a large number of individuals managed in clinical practice. Data from a pan-European registry on H. pylori management (Hp-EuReg3), which includes information from more than 32,000 people, were analysed to evaluate the efficacy and safety of this quadruple therapy, with the results presented by investigator, Olga Perez Nyssen from La Princesa University Hospital in Madrid, Spain.

"In Europe, bismuth quadruple therapy with a PPI, bismuth salts, tetracycline and metronidazole has resurfaced thanks to a new singlecapsule formulation," explained Olga Perez Nyssen. "There is still little evidence of its efficacy and safety in routine clinical practice because Pylera[®] is still not commercially available in most European countries."

A total of 2,323 H. pylori-infected individuals who were treated according to the manufacturer's prescribing information for Pylera® (three capsules four-times-daily for 10 days + a PPI) were included in the analysis: most (63%) had received no previous H. pylori treatment. A modified intent-to-treat analysis found that *H. pylori* eradication was achieved in 94% of treatment-naïve individuals and in 90% and 85% of those who received the quadruple therapy as second- and third-line therapy. Multivariate analyses found that being naïve to treatment and good compliance with treatment (>90% drug intake) were significantly associated with higher eradication rates. Adverse events were reported by 30% of the cohort; most were mild or moderate in intensity. Three serious adverse events were reported. "Treatment with single-capsule bismuth-quadruple therapy (Pylera®) achieves H. pylori eradication in clinical practice in approximately 90% of patients by modified intentto-treat analysis, both in first- and second-line treatment," said Olga Perez Nyssen. "Pylera® has a favourable safety profile."

Is dietary modification a potential treatment strategy for inflammatory bowel conditions?

Scientists from Groningen in the Netherlands have suggested that dietary manipulation could one day become a viable treatment strategy for people with inflammatory bowel conditions, such as IBD. The team investigated the effects of 160 dietary factors on the gut microbiome in four cohorts representing the general population, Crohn's disease, ulcerative colitis, and IBS (N=1,425). Stool samples from study participants were analysed alongside Food Frequency Questionnaires, with microbiota composition evaluated using shotgun metagenomic sequencing.

Clustering analyses identified 25 dietary patterns, 29 groups of species, and 31 functional groups of microbiota, as well as 38 associations between food patterns and microbial groups. According to Laura Bolte from the University Medical Center in Groningen, bread and legumes were associated with a decreased abundance of E. coli and Bacteroides fragilis. Fish and nuts were negatively associated with bacterial pathways associated with endotoxin synthesis, but positively associated with fermentation-associated pathways. A fast food pattern was associated with an increased abundance of Clostridium boltaea and Coprobacillus, which, she said, have previously been implicated in the metabolic syndrome. Comparing the effects of plant versus animal protein, the researchers found that, while plant protein was associated with an increase in Bifidobacteria and a decrease in Blautia and Streptococci, the opposite was true for animal protein. Low-fat fermented dairy correlated with an increase of Lactococcus lactis, Lactobacilli and Bifidobacterium bifidum, as well as pathways of peptidoglycan synthesis possessed by lactic acid bacteria. A pattern comprising plant protein, vegetables, fruits, cereals, nuts, wine and fish was associated with increased abundances of short-chain fatty acid-producing bacteria and carbohydrate fermenting pathways. Similar patterns were observed across all cohorts with inflammatory bowel conditions.

The authors believe they have demonstrated an association between specific foods and the abundance of bacteria capable of the biosynthesis of essential nutrients and carbohydrate fermentation to SCFAs, suggesting that certain foods could exert mucosal protection by inducing bacteria with anti-inflammatory properties. "Our work provides support for the idea that diet represents a therapeutic strategy for intestinal diseases through the modulation of the gut microbiome", commented Laura Bolte.

¹ Glyncyzynski et al. FICMID 2001

^{2.} Megraud F. et al. Gut 2012;62(1):34-42.

^{3.} McNicholl AG, et al. Helicobacter 2019;24(5):e12630

Small intestine microbiome differs between obese and non-obese individuals

A first-in-kind study conducted in the USA has found marked differences in the small intestine microbiome between obese and non-obese individuals, with differences associated with changes in metabolic profiles. The study evaluated the small bowel microbiome in consecutive individuals undergoing upper endoscopy without colonoscopy, with duodenal aspirates collected using a sterile aspiration catheter technique, and microbiota analysed using metagenomic sequencing. Blood samples taken prior to the procedure were used to measure a range of metabolic parameters and other markers. Stool samples were also taken for microbiota analysis. One hundred and seven normal weight controls (BMI 18.5-24.9) and 49 obese individuals (BMI ≥30) were included in the study and had their duodenal microbiome completely sequenced. Twenty-two of the normal-weight individuals (21%) and 16 obese individuals (33%) had known diabetes.

According to Ruchi Mathur from Cedars-Sinai Medical Center in Los Angeles, USA, who presented the study findings, the a-diversity indexes for both groups of individuals were similar, and, unlike in previous studies looking at stool microbiota, the Firmicutes:Bacteriodetes ratio in obese individuals was not decreased compared to those with a normal weight. The relative abundances of Lactobacillaceae and Clostridiaceae families (both from Firmicutes phylum) were found to be increased among the obese individuals compared to controls, as were the relative abundancies of the Neisseriaceae and Pasteurellaceae families (both from Proteobacteria phylum). Correlating between metabolic markers and genus and family candidates found to be associated with obesity in the absence of diabetes, the investigators observed that the Lactobacilliaeae family and Lactobacillus genus were both associated with decreased high-density lipoprotein (HDL), and the Orchrobactrium genus was associated with elevations in triglycerides.

Based on these findings, the research team concluded that the small intestinal microbiome may have an effect on parameters of metabolic dysfunction and metabolic syndrome.





Budesonide orodispersible tablets achieve rapid and sustained remission in eosinophilic oesophagitis

Budesonide orodispersible tablets (Jouveza®) achieve rapid and sustained remission in adults with eosinophilic oesophagitis (EoE) according to the results of the EOS-2 trial. In a 6-week, open-label induction phase of the study, which was presented by Alfredo Lucendo from the General Hospital of Tomelloso in Spain, 181 individuals with active eosinophilic oesophagitis were treated with budesonide orodispersible tablets 1 mg twice-daily (BID). Clinico-histological remission (≤2 points on 0 to 10 rating scales for dysphagia and pain during swallowing on each of the 7 days prior to end-of-treatment and histological remission [peak eosinophil count <16 eos/mm2 hpf] at Week 6) was achieved in 69.6% of participants after 6 weeks of treatment. Marked improvements from baseline in other clinical, endoscopic and histological endpoints were also observed.

The second, 48-week, double-blind, placebo-controlled maintenance phase of the study, which was described by Alex Straumann from the Swiss EoE Research Network in Olten, Switzerland, and Luc Biedermann from Zurich University Hospital in Switzerland, evaluated the longterm efficacy and safety of two doses of budesonide orodispersible tablets (1 mg and 0.5 mg BID) compared with placebo over 48 weeks in 204 individuals entering the study in clinico-histological remission (many transitioning from the first study). Both doses of budesonide orodispersible tablets were reported to be statistically significantly superior to placebo in terms of the percentage of patients in clinicohistologic remission after 48 weeks of treatment (1 mg BID 75.0%, 0.5 mg BID 73.5%, placebo 4.4%) (p<0.0001 budesonide vs placebo). At Week 48/end-of-treatment, significantly more patients were also in endoscopic inflammatory remission (all modified EREFS features graded 0 [absent/none]) at Week 48/end-of-treatment (1 mg BID 75.0%, 0.5 mg BID 72.1%, placebo 5.9%) (p<0.0001), maintaining endoscopic inflammatory remission (1 mg BID 79.2%, 0.5 mg BID 71.1%, placebo 8.5%) (p<0.0001), and in complete endoscopic remission (1 mg BID 57.4%, 0.5 mg BID 52.9%, placebo 5.9%) (p<0.0001 budesonide vs placebo). Both active treatment groups were also found to have delayed or reversed fibrotic modelling, as indicated by an improvement in fibrotic signs such as fixed rings.

Long-term treatment of EoE with budesonide orodispersible was well tolerated. The majority of adverse events were mild, there was no relevant adrenal suppression, and candidiasis was described as a 'minor problem' seldom requiring treatment.



Vedolizumab produces higher rates of early clinical and histological remission than adalimumab in ulcerative colitis

Vedolizumab produced higher rates of early clinical and histological remission than adalimumab in exploratory analyses of data from VARSITY, which involved almost 800 individuals with moderately to severely active UC. This was the first and much-welcomed head-to-head clinical study comparing two biologics in UC, with recently-published primary and secondary analyses suggesting that vedolizumab achieved higher rates of clinical remission and endoscopic improvement at Week 52 than adalimumab.1

The predefined exploratory endpoints reported at UEG Week 2019 included clinical remission at Week 14 (complete Mayo score of ≤2 and no individual subscore >1 point), and histological remission (Geboes score <2 or Robarts Histopathology Index [RHI] score <3) at Weeks 14 and 52. These endpoints were assessed in 769 individuals who received ≥1 dose of vedolizumab (n=383) or adalimumab (n=386) in VARSITY.

Early clinical remission data were presented by Silvio Danese from the Humanitas Research Hospital in Rozzano, Italy. He demonstrated that a higher proportion of individuals treated with vedolizumab achieved clinical remission based on complete Mayo score at Week 14 with vedolizumab (26.6%) than with adalimumab (21.2%) (p=0.08). Biomarker results followed the same trends, with numerically greater decreases in faecal calprotectin and C-reactive protein seen over time with vedolizumab than with adalimumab.

Laurent Peyrin-Biroulet from Nancy University Hospital in France reported the histologic remission data from VARSITY, and showed that significantly greater proportions of study participants achieved histological remission at Week 14 and Week 52 in the vedolizumab compared with the adalimumab treatment groups.

At Week 14, histological remission (RHI score <3) was achieved by 25.6% of the vedolizumab group and 16.1% of the adalimumab group (p=0.0011). At Week 52, 37.6% and 19.9% of each group, respectively, were in histological remission (p<0.0001). Higher rates of histological remission were reported on most analyses at Week 14 and Week 52 in both treatment groups among those who were anti-TNF-naïve.

Laurent Peyrin-Biroulet described the 14-week endpoint as being insightful, suggesting that future studies should include it.

Human milk oligosaccharides improve symptoms of irritable bowel syndrome

An open-label study investigating the effects of human milk oligosaccharides (HMOs) as a nutritional supplement in individuals with IBS has reported significant improvements from baseline in stool consistency, abdominal pain, and bloating, and improved healthrelated quality of life as early as 4 weeks after supplement initiation.

The multicentre study, presented by Olafur S. Palsson from the University of North Carolina at Chapel Hill in the USA, involved 317 individuals with various subtypes of IBS (Rome IV criteria) who ingested a 5 g mixture of the HMOs, 2'fucosyllactose (2'FL) and lacto-N-neotetraose (LNnT) daily for 12 weeks. Bowel habits, IBS symptoms and quality of life were assessed at baseline and every 4 weeks during the intervention. A total of 273 individuals (86%) completed the course of treatment.

In an intention-to-treat analyses of the full study population (n=317), statistically significant reductions from baseline were observed in the total percentage of abnormal-consistency stools reported (Bristol Stool Form Scale types 1, 2, 6, or 7) at Weeks 4, 8 and 12, with a reduction in abnormal stools from 90.7% at baseline to 57.2% at Week 12 (p<0.0001). Significant reductions from baseline at Weeks 4, 8 and 12 were also reported in the total IBS Symptom Severity Score (IBS-SSS), the gastrointestinal symptom severity score (GSRS-IBS), and the abdominal pain severity, pain frequency, and bloating severity scores of the IBS-SSS (all p<0.0001).

Health-related quality of life, as measured using the IBS Quality of Life Scale (IBS-QOL) also improved significantly from baseline at Weeks 4, 8, and 12 (p< 0.0001). Treatment response was similar across all IBS subtypes, and most of the symptom improvement was apparent during the first 4 weeks of supplementation.

The study product was well tolerated by most patients, with mild GI symptoms such as abdominal discomfort, distension and flatulence the most frequently reported side effects.





Gene signature may predict HCC in chronic hepatitis B/C infection

RNA sequencing of liver biopsy tissues from people with antiviralnaïve chronic hepatitis B and C (CHB, CHC) infection could help to predict who will develop hepatocellular carcinoma (HCC) many years in the future.

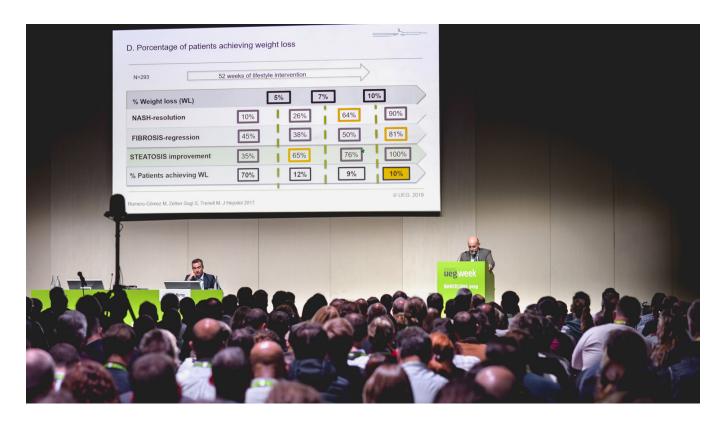
Investigators from Belgium and the Netherlands have identified the first liver transcriptome profiles that they believe can distinguish between individuals with CHB/CHC who will go on to develop HCC and those who will not.

The late-breaking study presented by Sven Van Hees from the University of Antwerp in Belgium involved five hepatology clinics that retrospectively identified 72 individuals with CHB/CHC who had undergone liver biopsy before the initiation of antiviral treatment. Of these, 34 had subsequently developed HCC at a median of 8.3 (interquartile range 4.8-10.1) years after their biopsies. These individuals were matched with other people with CHB/CHC who did not develop HCC after a similar or longer follow-up period. RNA sequencing was performed on RNA extracted from the baseline biopsies.

According to the investigators, despite well matched clinical and demographic characteristics at baseline, at least 452 genes were differentially expressed between cases with and controls without future HCC development in each subgroup. Little overlap (≤10%) was observed in differentially expressed genes between cirrhotic and noncirrhotic CHB and CHC patients, suggesting that distinct processes leading to HCC oncogenesis may have been triggered by the viruses. Among the top 20 up- and down-regulated genes in each subgroup, 40-75% had previously been linked to oncogenesis, which, say the investigators, underlines the biological relevance of their findings. A random forest classifier was able to predict HCC development with an accuracy of 84.7%, a negative predictive value of 92.1%, and a positive predictive value of 75.8% based on the subgroup and baseline expression levels of 20 genes, several of which have previously been linked to hepatocarcinogenesis.

"Our data suggest that the liver of chronic hepatitis B and C patients contains a genetic imprint for HCC development," said Stijn Van Hees. "A 20 gene signature may be able to predict future HCC development with high accuracy."

Revisit UEG Week Barcelona via 24/7 and stream over 120 recorded sessions!



Oral capsule for gastric electrical stimulation shows promise in first-in-human obesity study

A capsule device designed to be swallowed that delivers gastric electrical stimulation (GES) has produced promising results in a small first-in-human obesity study. The safety and feasibility study involving six overweight or slightly obese (class 1) individuals found the capsules to be well tolerated, reducing both appetite and the consumption of a nutrient test drink.

Gastric electrical stimulation has been shown to reduce appetite, food intake and weight, leading to the 2015 approval by the U.S. Food and Drug Administration (FDA) of a surgically implanted gastrostimulator device for the treatment of obesity. Unlike the current system, the new system (Melcap One Day Capsule System) comprises capsules the size of a standard vitamin capsule that are ingested each day, delivering intra-gastric or and/or intestinal stimulation that can be synchronized with the recipients meal schedule.

For the first-in-human study presented at UEG Week 2019 by Roey Ringel from Columbia University in New York, USA, six men and women aged 21-65 years with a BMI of 27-35 (overweight and class 1 obese) were enrolled into a 7-day study (3-day screening, 4-day treatment period) in which they ingested one gastric stimulation capsule on day 1 and another on day 3 of the treatment period. Safety assessments included capsule expulsion, adverse events, and 24-hour Holter ECG monitoring. Efficacy measures included satiety and hunger levels, and response to a nutrient drink test.

All study participants expelled the capsules naturally and no other clinically-significant safety findings were reported; only one adverse event (abdominal discomfort) was considered likely to be related to the study treatment. The capsule treatment was associated with a decrease in the volume of liquid ingested during the nutrient drink test, with four out of six individuals consuming an average of 27% less volume after receiving the capsule compared to their baseline consumption. The treatment was associated with a considerable decrease in the hunger/satiety composite score compared to baseline.



UEG Week

Prize Winners



UEG Research Prize - Silvio Danese

Silvio Danese was awarded the distinguished UEG Research Prize for his outstanding project; 'The gut virome as a trigger for IBD: from metagenomics to pathogenesis'.

"Bacteriophages have been studied for their role in shaping the bacterial composition of the gut but the eukaryotic viruses, for their ability to integrate into the eukaryotic cells, including the host's gut mucosa, are endowed with very intriguing properties in modifying the host's response to the environment. In fact, they can influence the host's transcriptional state and may latently stimulate the host's immunity. In my opinion, this process might represent the initial stage of intestinal inflammation and, for this reason, I'd like to dedicate more attention to this very promising topic.

In my opinion, one of the most striking findings for this research is the existence of eukaryotic viruses integrated within the host's cells because we found their RNAs in the gut mucosa. Therefore, such RNAs are decoded by the host's transcriptional machinery and they are likely translated into vital proteins and presumably impact the host's immunity. In my laboratory, we are currently investigating how these viral proteins may intervene in IBD etiogenesis.

If we confirm our hypothesis, we can think about alternative therapies that seek for causes to be 'switched off' without impacting contrasting IBD symptoms. This would represent a real breakthrough in the IBD field and will open new frontiers for basic and clinical research. For example, early-diagnosed IBD patients, once assessed for the presence of the mucosal viruses, might be treated with specific siRNAs or antiviral drugs that directly and specifically inhibit initial phases of inflammation. This would avoid immune suppressive treatments and provide innovative protocols for patients.

I'm sure we will obtain promising results in the very near future and will provide novel, striking insights that will improve current knowledge in IBD clinical and basic practice. I am very grateful to receive this award and look forward to the demanding but exciting challenge ahead."

UEG Research Fellowship -Michał Żorniak

Michał Żorniak was awarded the UEG Research Fellowship and will visit the Pancreatic Diseases Research Unit in Ludwig-Maximilians University, Munich, Germany for the duration of 12 months. Żorniak is currently a gastroenterology and hepatology trainee in the Department of Gastroenterology and Hepatology in the Medical University of Silesia, Katowice, Poland, with a special research interest in liver and pancreatic diseases. Together with his host Julia Mayerle, he will carry out a research project on the 'Role of biliary microlithiasis-induced NLRP3-inflammasome activation for papillitis and the development of pancreatitis'.

"I was inspired to apply for the UEG Research Fellowship by my attendance at UEG Week and my involvement with the UEG Young GI Network, which I have been familiar with since 2014. I have met a lot of magnificent people through this and have become very good friends with a number of active and energetic young researchers. My association with the network made me aware of new opportunities, which grew every year, as Young GI became a more important part of UEG. Programmes offered by UEG, such as the Clinical Fellowship Programme, as well as the Research Fellowship, make young gastroenterology researchers a lucky and privileged group across Europe and the world. The fellowship has allowed me to develop in many fields as a researcher. Working alongside very experienced and accomplished scientists can be challenging but I am happy to learn from them and gain new experience. Through my work with the Pancreas Research Group, led by Professor Mayerle, I have been introduced to a broad variety of animal models as well as isolation of primary pancreatic cells in combination with molecular biology techniques to gain an understanding of the cellular and subcellular processes that lead to acute pancreatitis. Many challenges still remain in the field of pancreatic diseases. One of the most important of these is research on acute and chronic pancreatitis, as well as pancreatic cancer. We hope that the outcomes of this project will shed some new light on the pathophysiology of acute pancreatitis, which is still a difficult clinical and research problem."

Watch a video interview with Michał Żorniak



This year's UEG Lifetime Achievement Award winner is Peter Malfertheiner!



Peter Malfertheiner was awarded with the distinguished UEG Lifetime Achievement Award at UEG Week 2019. The laudation of the award was delivered by Julia Mayerle during the Opening Session at the congress.

"I have been fascinated by the digestive system since being a medical student at the University of Bologna, where I was inspired by exciting lectures and motivating mentorship.

I have experienced many highlights as a gastroenterologist, including the first completion of an interventional endoscopic procedure and my first publication of original research. A special highlight of my career was the unique opportunity to embark on a completely new clinical area of our discipline, linked to the discovery of H. pylori. I was fortunate enough to work and engage in this field from its beginning, at a controversial time where H. pylori was negated by many key opinion leaders in gastroenterology. I am proud to have dedicated an important time of my academic career to study, promote and disseminate

the role of the *H. pylori* infection, which has become a successful story with many unforgettable moments.

Receiving the UEG Lifetime Achievement Award has enabled me to look back at all of the opportunities, successes and setbacks in my career and motivates me to continue in the gastroenterology field with passion. It has allowed me to remember many rewarding professional relations during my career so far, including teachers, mentors and colleagues from all around the world.

I am extremely proud of receiving this award and would like to share the recognition with the many pupils and teams that have contributed in an essential way to my personal career. I would like to dedicate it to my wife and children, for whom I have deep gratitude for their ongoing support and understanding in my medical career."

Watch a video interview with Peter Malfertheiner



Under the Spotlight: UEG Journal with Joost PH Drenth

With a refreshed look and a new Editor-in-Chief, 2019 marks a new era for the UEG Journal. Here, Joost PH Drenth discusses his plans and ideas for the Journal.

"UEG Week Barcelona 2019 coincides with the publication of the October issue of the UEG Journal, which picks up the pulse of the congress and publishes the meeting's abstracts that reflect scientific innovation and development.

Science is made by people, and that is why it is important to pay tribute to the researchers who create science and progress in the field. The UEG Journal therefore identifies the most remarkable papers, published by remarkable people, and offers the Journal Best Paper Award. This year marks the fifth time that the UEG Journal has selected this award and, whilst we evaluated many excellent contributions, Liat Gutin's paper describing a prospective, open-label, single-centre study including 10 patients with Crohn's disease undergoing faecal microbiota transplantation was selected. While the trial came with a sobering message, it attracted significant interest and attention from the wider community.

The scientific and social media worlds are two areas that are swiftly coming together. With this in mind, we have decided to use social media as a platform for knowledge dissemination relating to the UEG Journal and I therefore encourage Twitter users to track and engage in the latest discussions by following @UEGlournal.

UEG has recently embarked on a new rebranding strategy, prompted by the desire to continually evolve and bring greater relevance and accessibility to our global audiences. To align with this, the face of the UEG Journal is also changing, with a new cover, look and feel. It's great to see the alignment between the UEG Journal and wider UEG offerings, and I hope our readers enjoy this dynamic drive to continue to deliver clinical information from our field."

UEG Journal Best Paper Award -**Liat Gutin**

This year's UEG Journal Best Paper Award was presented to Liat Gutin, as the first author of the winning article: 'Fecal microbiota transplant for Crohn disease: A study evaluating safety, efficacy, and microbiome profile'. Liat and her colleagues performed a prospective, open-label, single-center study to determine whether single-dose faecal microbiota transplant (FMT) improves clinical and endoscopic outcomes in Crohn's disease patients and to identify meaningful changes in the microbiome in response to FMT.

Liat Gutin is currently a fellow in gastroenterology at Kaiser Permanente Northern California. Her main areas of interest are nutrition, inflammatory bowel disease and functional GI disorders, and the intersection of all these areas of gastroenterology. She ultimately plans to pursue additional training in IBD.

"Three of the ten patients showed a clinical response to FMT, which is lower than previous reports. In the clinical responders there were still no objective improvements in inflammation measures. Interestingly, the responders tended to have lower microbial diversity, which may be an indication of which patients will respond to FMT.

Further to this, two of the patients experienced flare in their disease shortly after undergoing the treatment, highlighting the potential harm of the procedure and the need for larger randomised controlled trials to assess the safety and efficacy of FMT in this patient population.

I am excited and incredibly honoured by this recognition of our work. I believe that this is an important study, which gave interesting data on the changes in the microbiome that occur in patients with CD as a result of FMT. Furthermore, it showed us that faecal transplant is not a benign intervention and that there can be significant side effects to this therapy."

Watch a video interview with Liat Gutin



Each year, the UEG Scientific Committee and National Societies Committee jointly select 6-8 emerging clinical scientists as Rising Stars.

scientific independence. The initiative

Thomas Bird

Johan Burisch

Sarwa Darwish Murad

Ihsan Ekin Demir

Sheraz Markar

Iean Charles Nault

María Jesús Perugorria

Thomas Reiberger

Find out more about the UEG **Rising Stars Award**



María Jesús Perugorria **UEG Rising Star in IBD**

"My research career has been focused on understanding the molecular mechanisms involved in the progression of chronic liver disease, from chronic liver inflammation to liver fibrosis, cirrhosis and hepatocellular carcinoma development. I have always had a natural curiosity into the pathophysiology underlying human diseases and, knowing that by generating new knowledge about the unmet needs in hepatic diseases can positively influence the quality of life for patients, I was inspired to pursue a career in chronic liver disease. Hepatocellular carcinoma is the third leading cause of cancer-related mortality and the most commonly used systemic therapies have a minimal impact on patient survival. There is an unmet need for discovering new and effective therapeutic options for patients, which is one of the aims of my research. During hepatocellular carcinoma

development, other than specific genetic mutations, there are several signalling pathways altered, including pathways that are aberrantly activated by growth factors and cytokines that are produced by the tumour or stromal cells. Generating new knowledge about how tumour cells interact with their environment, especially their crosstalk with the main pro-fibrotic cells in the liver, and uncovering new potential targets for therapy, is a fascinating career achievement that I am particularly proud of. I am deeply honoured and feel humbled and privileged to receive the UEG Rising Stars Award. There are lots of people who have contributed to the growth and success in my career, and this award is a testament to their help. This recognition also goes to my family, who have continuously provided encouraging support. I am excited to continue exploring this incredibly rewarding and fascinating topic further."

Watch a video interview with María Jesús Perugorria

Experts tackle outstanding IBD-related burning questions in relation to the latest emerging treatment options







This Janssen-sponsored satellite symposium at the United European Gastroenterology Week Barcelona 2019 offered attendees the opportunity to participate in lively discussions regarding the outstanding burning questions associated with inflammatory bowel disease (IBD) management, using real-life patient cases to guide the dialogue. The discussions were moderated by an expert panel: Prof. Julián Panés (Spain), Prof. Laurent Peyrin-Biroulet (France) and Prof. Séverine Vermeire (Belgium).

IBD is the term often used to cover two gastrointestinal conditions: Crohn's disease (CD) and ulcerative colitis (UC), both of which have several overlapping clinical features.¹ Both diseases also have a substantial impact on patient quality of life: both have been associated with the development of depressive symptoms, as well as other burdensome complications, including extensive bowel damage and dysfunction, and an increased risk of cancer or dysplasia.² However, it is becoming increasingly clear that a treat-to-target strategy is necessary for optimal disease control.

Treat-to-target strategies are becoming increasingly important for proper IBD management and optimal disease control.

The treat-to-target strategy for CD and UC includes a baseline assessment to determine the risk of progression, followed by therapy in accordance with the current risk and treatment target. Achievement of a Mayo endoscopic sub-score of o or 1 (UC goal) or the absence of endoscopic ulceration (CD goal) indicates that the target has been met; at this point patients should continue treatment, with regular monitoring.² These goals could be achieved via the combination of a biologic with other immunomodulator therapies, though corticosteroid use should be avoided if possible.

The panel illustrated several points regarding optimal timing of biologic treatment initiation and discussed which current treatment guidelines are the best to use. The panel shared several hot-off-the-press points from the recent UNIFI clinical trial with ustekinumab, a novel anti-interleukin (IL)-12/23 monoclonal antibody. The UNIFI study included both an induction and maintenance phase, each with its own separate endpoints. The primary endpoint for the induction study was clinical remission at Week 8 of treatment, while the primary endpoint for the maintenance study was clinical remission at Week 44 of treatment.^{3,4}

The data illustrated that induction and maintenance therapy with ustekinumab resulted in statistically



significant levels of clinical remission, compared with placebo, at Weeks 8 and 44 in patients with moderate-to-severe UC.^{3,4} Further analysis of the primary and secondary endpoints revealed that patients receiving ustekinumab also showed changes in endoscopic healing and clinical response at Weeks 8 and 44, compared with placebo. Of note, approximately 85% of biologic non-failure patients, and 80% of all patients, had achieved a clinical response at Week 8 or 16 of treatment.⁵

associated with several currently available biologics,7 though treatment with ustekinumab, as shown by the IM-UNITI study, results in generally low immunogenicity and serious infection risk in patients with CD.8 Rates of antibody formation were low through Week 156 of treatment; among all the patients treated with ustekinumab in the induction and maintenance studies who entered the long-term extension, only 4.8% developed antibodies at any time during the maintenance phase.8

Data from the UNIFI trial illustrated that induction and maintenance therapy with ustekinumab in patients with moderate-to-severe UC resulted in statistically significant levels of clinical remission, compared with placebo, at Weeks 8 and 44.3.4

Only 4.8% of patients with Crohn's disease developed antibodies to ustekinumab treatment at any time during the IM-UNITI and long-term extension trials, through Week 156.

The challenge of choosing the optimal biologic therapy represented a further unmet need, as current guidelines do not specify which biologic treatments to use on an individual patient basis. The examination of a clinical case, that of a patient with UC and extraintestinal manifestations, led to a discussion of the use of ustekinumab as a second-line biologic therapy. The induction and maintenance data from the UNIFI studies underlined that treatment with ustekinumab resulted in statistically significant improvements in clinical remission at Weeks 8 and 44, compared with placebo, regardless of previous biologic treatment failure.6

The experts concluded that the evolving landscape of IBD management should now include a treat-to-target approach and shared their advice on several treatment options. The panel also discussed the most recent data on ustekinumab as a treatment option for patients with moderate-to-severe UC.

Induction and maintenance therapy with ustekinumab resulted in statistically significant improvements in clinical remission at Weeks 8 and 44, compared with placebo, regardless of previous biologic treatment failure status in patients with moderate-to-severe ulcerative colitis.6

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This symposium and advertorial are not affiliated with UEG



Delegates at UEG Week were provided with the opportunity to celebrate 50 years of colonoscopy by visiting an interactive exhibition that showcased five decades of advancement in the procedure. Visitors were taken on a fascinating journey into the past, present and future of colonoscopy through fine art, engaging storytelling, interactive memorabilia and state-of-the-art science. At the heart of the exhibition, delegates were shown the impact that colonoscopy has had on patients' lives, which included testimonials, anecdotes and hopes for the future.

Since the first colonoscopy 50 years ago, the procedure has become a crucial tool in the prevention and detection of gastrointestinal diseases,

including colorectal cancer. However, despite significant advances, there is huge variation in uptake across Europe demonstrating how colonoscopy is still not being fully utilised.

Paul Fockens, UEG President, commented "We have come a long way since the introduction of this important technique. Colonoscopy is a potentially life-saving procedure for many patients and has a vital role to play in enhancing digestive health. Today we celebrate scientific dedication and cutting-edge technology to care for patients."

UEG would like to thank Norgine, Fujifilm and Olympus for jointly supporting this educational exhibition in association with UEG Week.





Raising Vital Money for Pancreatic Cancer

New research presented at UEG Week revealed that global pancreatic cancer death rates had increased by 10% between 1990 and 2017. Despite appalling patient outcomes and chances of survival, pancreatic cancer receives less than 2% of overall cancer research funding across Europe.

Delegates at the congress had the opportunity to purchase new merchandise and donate to the Spanish charity La Carrera de las Ciudades Contra el Cáncer de Páncreas ('The Race of Cities Against Pancreatic Cancer'), which aims to raise awareness and funds to fight



pancreatic cancer. Donations from UEG Week delegates raised €2,850 for the charity.

UEG would like to thank everyone that donated for their kind generosity.

Visit 'Carrera de las Ciudades Contra el Cáncer de Páncreas' website

Read UEG's report: Pancreatic Cancer Across Europe - Taking a united stand





Inspiring the Next Generation of Gastroenterologists

UEG Week is the premier place for gastroenterology trainees and young fellows to gain valuable career advice and scientific knowledge.

Organised by the UEG Young Talent Group, the Young GI Network at UEG Week is dedicated to support congress delegates below the age of 40 by providing the opportunity to obtain guidance from mentors and network with peers and senior experts.

Young gastroenterologists were treated to a variety of dedicated sessions during the congress programme, which included CV tips and tricks from experts, advice on submitting an impressive scientific paper and how fellowships and grants can help build a career in gastroenterology.

The networking event 'Let's meet!' provided another excellent opportunity for young delegates to meet colleagues from all over the world in an informal atmosphere. Participants were able to swap advice and form new collaborations at the Ultramarinos Santa Mònica in Barcelona.

Find out more about the Young GI Network and related activities at **UEG Week**







Making Equality a Reality in GI

UEG is delighted to see more women are getting involved in the digestive health scientific community. This year, for the first time, the UEG Equality & Diversity Task Force launched a special 'Women in GI' networking event at UEG Week. During the event, female gastroenterologists, surgical trainees and junior scientists were able to meet with peers and senior gastroenterologists to network, explore professional opportunities and establish contacts for future collaboration. Attendees were also able to learn more about the work of various UEG Boards, Committees and Task Forces, providing the foundations in establishing a strong future network of women in gastroenterology.

Female gastroenterologists had the opportunity to engage and learn from inspiring figures within the GI community at the event and throughout the congress, such as Lissy de Ridder (Top Abstract Awardee), María Jesús Perugorria (UEG Rising Star), Nurdan Tözün (Chair, UEG Equality & Diversity Task Force) and Dina Tiniakos (incoming Chair of the UEG Equality & Diversity Taskforce.





The goals of the UEG Equality & Diversity Task Force are:

- To encourage women (and other under-represented groups) to apply for open positions on the Boards and Committees of UEG.
- To strengthen networking to reach more trainees and established gastroenterologists and discuss barriers to career opportunities or research.
- To analyse the barriers for women attending UEG Week and to take on leadership positions on UEG Boards, Committees and Task Forces.
- To continue to create a close collaboration with the National Societies Committee and the Young Talent Group to disseminate our messages to various countries and groups involved in UEG.

UEG is delighted to have made great strides in providing women with a platform to further their career in GI. Use and follow #UEGWomeninGI on social media to connect with peers and receive the latest information on making equality a reality in gastroenterology.

Find out more about Women in GI at UEG

Meet UEG's newly elected Vice-President: **Helena Cortez-Pinto**

Each year at UEG Week, the Meeting of Members takes place to discuss the strategic direction of UEG and elect new officers within the organisation. At this year's meeting, Helena Cortez-Pinto was elected as UEG's first female Vice-President. Helena Cortez-Pinto is from the Department of Gastroenterology, University Hospital of Santa Maria in Lisbon, Portugal, and has served on the UEG Public Affairs Committee. She is an EU Policy Councillor at the European Association for the Study of the Liver (EASL) and has published more than one hundred articles in leading scientific publications.

UEG would like to congratulate Helena and is thoroughly looking forward to her tenure as UEG Vice-President and President.

Postgraduate Teaching Programme

This year's record-breaking Postgraduate Teaching Programme (PGT) covered year 3 of the 3-year rolling curriculum, enabling learners to select sessions most relevant to their personal need, with a host of subjects delivered using a variety of interactive teaching methods.

Opening this year's programme, UEG President, Paul Fockens, highlighted the growing number of physicians taking part in the course. "The PGT is becoming a huge, huge success," he said. "At this year's meeting we have more than 4,000 people registered for the course, with numbers growing year on year. So something is going well!" In the area of inflammatory bowel disease (IBD), this year's curriculum focussed on how to use drugs and how to monitor disease activity. Here is a small taste of what delegates learnt about these topics over the PGT weekend.

How to use drugs in IBD

Delegates who attended this lively session heard presentations from IBD experts who addressed issues ranging from the role of therapeutic drug monitoring (TDM) in managing IBD patients to how to position the available drugs in ulcerative colitis (UC) and Crohn's disease (CD), how to use drugs before and after surgery in CD, and how to optimise medical treatment over the course of the disease. Shomron Ben-Horin opened the session by providing a greater understanding of factors influencing drug levels, suggestions on how to use reactive TDM to better manage patients with a loss of response, and discussing the place of proactive TDM to control disease activity and prevent relapses.

Iris Dotan and Matthieu Allez delivered interactive a tandem talk on how to position drugs in UC and CD, reviewing the pros and cons of currently-available treatments, before providing practical recommendations on when to consider the older and new agents in each of these conditions. They argued that conventional treatments such as 5-ASA and corticosteroids still have a role to play in the management of selected patients and that positioning of biologics and JAK inhibitors needed to be based on consideration data from pivotal studies, real-world evidence, comparative analyses and headto-head studies, as well as local constraints and patient factors and preferences. James Lindsay discussed strategies to optimise medical treatment over the disease course, reminding delegates that untreated active disease leads to adverse outcomes. "The goals of therapy are really simple," he said. "We need to get the patient better, we need to keep the patient better, and we need to avoid complications from both the disease and therapy." He looked at how therapeutic targets have become more ambitious over the years, with mucosal healing and histological remission now achievable in many patients. He also stressed the importance of monitoring both symptomatic and asymptomatic individuals to enable timely treatment decisions. "We should always monitor the impact of our decisions and be prepared to change if our monitoring tells us we're not winning," he concluded.

Monitoring disease activity in IBD

This PGT session reviewed why it is essential to monitor disease activity in IBD and looked at different monitoring techniques and their challenges in clinical practice. Laurent Peyrin-Biroulet presented the evidence for disease monitoring in UC and CD, and argued that one of the most important developments in recent years is the role of biomarkers such as C-reactive protein (CRP) and faecal calprotectin (FCP) for monitoring disease activity. Based on current evidence, he suggested that FCP monitoring is a now viable method to optimise treatment in routine practice and that use of this biomarker, alongside other objective signs of inflammation, should enable prompt disease control based on tight monitoring, potentially avoiding the need for early intervention with biologics.



Johan Burisch and Marieke J. Pierik together discussed how to increase patient acceptance and participation in disease monitoring using both classical and novel technology-based approaches, while Peter Bossuyt outlined how best to combine biomarker and endoscopy to aid clinical decision-making. To end the session, Jordi Rimola and Gerhard Rogler presented their views on the roles of ultrasound and medical imaging in disease monitoring before Maria T. Abreu described her own case studies to illustrate some of the challenges and opportunities associated with integrated disease monitoring approaches in real-world practice.

Communicating GI hot topics around the globe

A selection of UEG Week's break-through abstracts were communicated to international journalists to ensure that the science presented at the congress was seen across the globe.

One of this year's press highlights focused on four late-breaking abstracts which, in collaboration with The Lancet Gastroenterology & Hepatology, presented four systematic analyses from the Global Burden of Disease Study 2017. Presented by Reza Malekzadeh, the abstracts outlined the burden of colorectal cancer, pancreatic cancer, gastric cancer and IBD across the world between 1990 and 2017.

Key findings indicated that global death rates for pancreatic cancer increased by 10% over the study period and that gastric cancer dropped from the second leading cause of cancer death worldwide to the third. Age-standardised incidence rates for colorectal cancer increased 9.5% globally but, by contrast, age-standardised death rates decreased by 13.5%. The researchers believe that this is due to the introduction of colorectal cancer screening programmes, leading to earlier detection and an increased chance of survival.

Commenting on the study, Herbert Tilg, Chair of the UEG Scientific Committee, stated, "This analysis provides the most comprehensive picture of the global burden of digestive disease to date. Examining these cross-populational trends offers vital information on the changing burden of disease and aids the correct allocation of resources to improve patient outcomes."

Further epidemiological research presented to the media at UEG Week indicated that the number of people suffering from IBD is three times higher than previous estimates, with sufferers at an increased risk of developing colorectal cancer than matched controls. Dominic King, lead researcher, commented, "Our study suggests that IBD prevalence is likely to rise substantially over the next decade. As there is currently no known cure for IBD, patients will often need complex and costly treatments throughout their lives. This predicted rise in prevalence may place an even greater strain on already overburdened healthcare systems."

Another study at UEG Week found that 18 commonly used drug categories extensively affect the taxonomic structure and metabolic potential of the gut microbiome. Researchers looked at 41 commonly used drug categories and assessed 1,883 faecal samples from a population-based cohort, patients with IBD and patients with IBS intermixed with healthy controls. The drug categories found to have the biggest impact on the microbiome included PPIs, metformin, antibiotics and laxatives. Commenting, lead-researcher Arnau Vich Vila said, "Our work highlights the importance of considering the role of the gut microbiota when designing treatments and also points to new hypotheses that could explain certain side-effects associated with medication use."

View all UEG Week Barcelona 2019 press releases

week HOT TOPICS 2019

IBD PREVALENCE THREE TIMES HIGHER THAN PREVIOUS ESTIMATES

IBD prevalence expected to rise by a quarter between 2017 and 2025

INCREASED RISK OF COLORECTAL CANCER

risk of developing colorectal cancer





Crohn's Disease and Ulcerative Colitis patients have a 23% and 43% increased



HALF OF COMMONLY-USED DRUGS PROFOUNDLY AFFECTING GUT MICROBIOME



18 commonly used drugs found to extensively affect gut microbiome

CHANGES IN **GUT MICROBIOTA**







Changes in gut microbiota linked to diabetes, liver disease, cancer and neurodegenerative diseases

RESISTANCE TO ANTIBIOTICS USED TO TREAT HARMFUL

STOMACH INFECTION DOUBLES IN 20 YEARS

PLANT-BASED FOODS AND MEDITERRANEAN DIET LINKED TO HEALTHY GUT MICROBIOME

FRIENDLY **GUT BACTERIA**





Legumes, bread, fish, nuts and wine associated with friendly gut bacteria

DECREASE IN BENEFICIAL BACTERIA

High consumption of meat, fast foods or refined sugar linked to decrease in beneficial bacteria





Antibiotic resistance kills more than 750,000 people per year



Resistance to commonly used antibiotics to treat H. pylori is increasing by 1% per year





#UEGambassador Awardee 2019: Enrique de Madaria

The #UEGambassador programme encourages enthusiastic gastroenterologists to use their social media power and influence to spread the word on important topics surrounding digestive health.

Ambassadors are invited to post scientific content, share recommendations and give peer-to-peer tips to fellow members of the GI community on social media.

This year's #UEGambassador Award was presented to Enrique de Madaria for his excellent contribution and promotion of digestive health throughout the year. Enrique de Madaria's tips for future ambassadors included sharing accurate scientific content, including visual aids within social media posts and also to make posts fun and sharable to catch the attention of social media users.

UEG would like to thank all of this year's ambassadors. You can view all ambassador activity, including posts from Enrique de Madaria, by searching #UEGambassador on Twitter or Facebook. Stay tuned for next year's programme!

View #UEGambassador on Twitter

Follow Enrique de Madaria on Twitter

UEG Week – World Class Scientific Research

Meet. Exchange. Evolve

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RAI Amsterdam, The Netherlands I October 10 – 14, 2020