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# Swiss Society of Gastroenterology
# Swiss Society of Visceral Surgery
# Swiss Association for the Study of the Liver
# Swiss Society of Endoscopy Nurses and Associates

## Abstracts of the annual meeting 2025

Interlaken (Switzerland), September 11–12, 2025

# SWISS SOCIETY OF GASTROENTEROLOGY (SGG-SSG)
# SWISS SOCIETY OF VISCERAL SURGERY (SGVC-SSCV)
# SWISS ASSOCIATION FOR THE STUDY OF THE LIVER (SASL)
# SWISS SOCIETY OF ENDOSCOPY NURSES AND ASSOCIATES (SVEP-ASPE)

## ABSTRACTS OF THE ANNUAL MEETING 2025

## INTERLAKEN, SEPTEMBER 11–12, 2025

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## IBD ORAL PRESENTATIONS

### IBD1

#### The GPR35 Ligand 8-Methoxykynurenate Drives Eosinophilic Esophagitis via IL-18-Mediated Barrier Dysfunction

Hassan Melhem[1], Tanay Kaymak[1], Emanuel Burri[2], Petr Hruz[1] and Jan Hendrik Niess[1]

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**Background:** Eosinophilic esophagitis (EoE) is a chronic inflammatory disorder driven by dysregulated cytokine activity and compromised epithelial barrier function. While G protein-coupled receptor 35 (GPR35) modulates these processes, its role in EoE remains unknown.

**Methods:** By combining computational docking and organoid barrier assays with an SDS-induced EoE model, we defined GPR35's role in driving IL-18-mediated epithelial dysfunction.

**Results:** Our study demonstrates that GPR35 is markedly upregulated in esophageal biopsies from patients with active EoE. In a murine EoE model, *Gpr35* expression was localized to esophageal macrophages. Strikingly, *Gpr35*$^{\Delta Cx3cr1}$ mice exhibited attenuated EoE pathology, which correlated with reduced IL-18 levels. Using computational docking, we identified 8-methoxykynurenate (8-MK), a tryptophan derivative, as a putative endogenous ligand for GPR35. Functional validation revealed that 8-MK stimulation in macrophages upregulated IL-18 production. Mechanistically, we found that GPR35 drives IL-18 expression by dysregulating intracellular calcium flux, leading to inflammasome activation. Critically, IL-18 directly impaired epithelial barrier function in human esophageal organoids, reduced transepithelial electrical resistance, and increased macromolecule flux in air-liquid interface cultures.

**Conclusion:** Our study identifies GPR35 as a key driver of EoE pathogenesis via IL-18-mediated barrier dysfunction, revealing a macrophage-epithelial axis that could be targeted therapeutically.

### IBD2

#### Acceptability and Tolerance of Risankizumab Treatment Administered via On-Body Injector in Patients with Crohn's Disease: Results of the Nationwide ACCEPT-OBI Study

Buisson, A.[1], Gebara, K.[2], Peyrin-Biroulet, L.[3], Boschetti, G.[4], Gilletta de Saint Joseph, C.[5], Brixi, H.[6], Juillerat, P*.[7], Serrero, M.[8], Vuitton, L.[9], Hébuterne, X.[10], Caillo, L.[11], Blain, A.[12], Laharie, D.[13], Pereira, B.[1] and Fumery, M.[14] for the GETAID group

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**Background:** Risankizumab (RZB) has been available in our country for Crohn's disease (CD) patients through an early access program and is now administered using an innovative medical device known as an on-body injector (OBI). We assessed the acceptability and the tolerance of RZB administration via OBI and compare its acceptability with other modalities of CD treatments, and searched for factors associated with the OBI acceptability.

**Methods:** This was a prospective, multicenter longitudinal study. All CD patients from the early access cohort treated with RZB via OBI starting in February 2024 were assessed at the time of the switch to OBI (week 0 = W0) and at W8, W16, and W24. The primary endpoint was acceptability, evaluated using a acceptability numerical scale (ANS) ranging from 0 (completely unacceptable) to 10 (perfectly acceptable).

**Results:** A total of 58 multi-refractory patients were included (mean age: 42.8 ± 13.8 years; 57.9% were women, 17.3% were smokers, 64.7% had a history of intestinal resection, and 78.2% were in PRO2-clinical remission). Therapeutic education sessions were conducted concurrently for 36.2% (21/58) of patients. OBI was applied to abdomen, thigh, or another site in 43.9%, 52.6%, and 3.5% of patients, respectively. RZB administration via OBI was well tolerated in 57.4%, with possible mild application-site pain (20.4%, mild in 90% of cases), localized erythema (22.2%), pruritus (16.7%), edema (16.7%). No factors affected the acceptability of risankizumab administration via OBI in more than 15% of patients. RZB acceptability via OBI was very high (9.5 ± 1.2) at W0, significantly better than RZB subcutaneous injections (6.98 ± 2.57; p <0.0001). OBI acceptability remained stable over time: 9.6 ± 1.2 at W8, 9.6 ± 1.4 at W16, and 9.6 ± 0.8 at W24 (p = 0.97). OBI acceptability as a medical device was better than other injectable administration modalities for IBD treatments: IV infusions (p <0.0001), pen injectors (p <0.001), and syringes (p <0.001). Overall, patients preferred OBI (64.0%), followed by oral administration (28.0%), subcutaneous injections (6.0%), and IV infusions (2.0%). When adjusted for administration frequency, RZB every 8 weeks via OBI was the most preferred method (ANS = 9.2 ± 2.0), compared to long interval subcutaneous injections (every 12, 8, or 4 weeks), more frequent injections (weekly or eow), and IV infusions every 4–8 weeks (p <0.001 for all comparisons).

**Conclusions:** In this cohort of refractory patients, the administration of risankizumab via OBI was highly acceptable to CD patients with excellent tolerance, suggesting that this new medical device could promote the use of risankizumab in clinical practice.

### IBD3

#### Natural history of eosinophilic esophagitis under anti-inflammatory treatment – The natural history study 2.0

Alain Schoepfer[1]*, Sofia Asikainen[1]*, Catherine Saner[1], Jean-Benoit Rossel[2], Fabrice Helfenstein[2], Luc Biedermann[3], Anne Godat[3], Alex Straumann[3] and Thomas Greuter[1,3,4,5]

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**Background:** Eosinophilic esophagitis (EoE) is a chronic relapsing T2 inflammatory disease of the esophagus that progresses to a fibrotic phenotype when left untreated. Current treatment options aim at controlling clinical, endoscopic and histological disease activity. However, as of yet, it remains elusive if such a disease control, particularly the long-term control of histological disease activity, can actually avoid the development of disease complications.

 

**Methods:** We evaluated prospectively included patients in the Swiss EoE cohort. Data on all patients with ongoing maintenance treatment, no concomitant gastroesophageal reflux, no strictures at baseline, and at least two follow-up visits were analyzed. We compared patients with ongoing disease activity vs patients with disease control, with regards to development of disease complications over time (such as strictures, bolus impactions and need for treatment escalation). Ongoing histological disease activity was defined by a peak eosinophil count of >15 eosinophil during all follow-up visits.

**Results:** We included a total of 151 patients with a median follow-up of 56.0 months (70.9% males, median age 39.0 years). 93 patients were classified as having disease control during follow-up (61.6%), while 58 patients (38.4%) showed ongoing histological disease activity. Development of complications occurred in a total of 108 patients (71.5%), significantly more often in patients with ongoing histological activity compared to patients with disease control (89.7 vs 60.2%, p <0.001). This difference was mainly due to higher rates of stricture formation and need for treatment escalation. Multivariate Cox regression models revealed ongoing disease activity as a significant predictor for the development of complications in the follow-up (HR 2.45, p <0.001), particularly for need for treatment escalation (2.63, p <0.001) and development of strictures (HR 3.16, p = 0.025).

**Conclusion:** Ongoing histological disease activity predicts development of complicating disease course in EoE patients. Current treatment strategies should aim at controlling both clinical and histological disease activity to prevent disease complications.

## IBD4

### Functional Dynamics of Esophageal Macrophages in Murine Models of Eosinophilic Esophagitis

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**Background:** Eosinophilic esophagitis (EoE) is a chronic, food allergen-driven inflammatory disorder of the esophagus. While eosinophils are the defining immune cells in EoE, the role of other immune cell types-especially macrophages-remains poorly characterized. Recent studies suggest that distinct macrophage subsets may shape local immune responses in mucosal tissue, however, their involvement in EoE pathogenesis is still unclear.

**Methods:** We employed sodium dodecyl sulfate (SDS)-and ovalbumin (OVA)-induced murine models of EoE. Flow cytometry was used to quantify classic ($MHCII^{-}$ $CD11b^{+}$) and mature ($MHCII^{+}$ $CD64^{+}$) macrophage populations in the esophagus. Immunofluorescence staining on esophageal tissue from untreated $CX3CR1^{GFP}$ mice was performed to assess baseline macrophage localization.

**Results:** Both classic and mature macrophage populations were significantly elevated during EoE induction in both models. Notably, three weeks after EoE was esdablished in OVA model –representing a resolution phase –eosinophil counts declined substantially, which was paralleled by a decrease in both macrophage populations. Immunofluorescence analysis in untreated $CX3CR1^{GFP}$ mice revealed that macrophages were predominantly located beneath the epithelial layer, suggesting a potential role in maintaining epithelial-immune homeostasis.

**Conclusions:** Our preliminary findings highlight a dynamic shift in esophageal macrophage populations during EoE progression and resolution. The spatial positioning of macrophages in non-inflamed esophagus suggests potential involvement in barrier integrity and immune regulation. Further investigations are ongoing to define macrophage ontogeny and function during EoE, aiming to explore macrophage-targeted therapeutic strategies.

## IBD5

### Characterization of Rgs14 in inflammatory bowel disease

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**Background:** Rgs14, a member of the regulator of the G protein signaling family, it negatively regulates signal transduction by accelerating the GTPase activity of G protein alpha subunits, thereby driving them into their inactive GDP-bound form. Rgs14 is a risk gene associated with ulcerative colitis. The mechanisms by which Rgs14 modulates intestinal immune homeostasis remain undefined.

**Methods:** We analyzed the expression of Rgs14 in patient samples and colitis models through qPCR analysis. Then identifying the impact of rgs14 on colitis after applying DSS colitis model after receiving the rgs14 conditional knock out mice in which rgs14 are knocked out separately in CX3CR1 positive macrophages and epithelial cells.

**Results:** Inflammatory bowel disease (IBD) patients showed increased Rgs14 expression through qPCR analysis. Crohn's disease and ulcerative colitis had higher Rgs14 expression levels in inflamed regions than in the non-inflamed areas. After conditional deletion of Rgs14 in macrophages and epithelium, then applying the DSS colitis model on the conditional knocked out mice and their littermates, conditional deletion of Rgs14 in macrophages aggravates colitis, while conditional deletion of Rgs14 in epithelium did not change colitis severity.

**Outlook:** Our results indicated an increase of Rgs14 expression in IBD patients, and that a conditional deletion of Rgs14 in macrophages and not epithelial cells aggravates colitis severity. These results indicated that the deletion of Rgs14 in colonic epithelial cells has no impact on murine colitis, and that Rgs14 deletion in macrophages plays an important role for colitis. The molecular mechanism of how Rgs14 affects the function of macrophages has yet to be solved. The novel mouse model will enable further dissection of the role of Rgs14 in defined cell types for IBD and other diseases.

## IBD6

### XBB.1.5 COVID-19 mRNA vaccines induce inadequate mucosal immunity in immunocompromised patients with inflammatory bowel disease

Simon Woelfel[1,2,3], Joel Dütschler[1,4], Daniel Junker[5], Marius König[1], Georg Leinenkugel[6], Claudia Krieger[1], Samuel Truniger[1,4], Annett Franke[1,4], Seraina Koller[1], Katline Metzger-Peter[6], Nicola Frei[1], STAR SIGN Study Investigators, Werner C. Albrich[7], Matthias Friedrich[3], Jan Hendrik Niess[6,8], Nicole Schneiderhan-Marra[5], Alex Dulovic[5], Wolfgang Korte[9], Justus J. Bürgi[9], Stephan Brand[1]

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**Background:** Mucosal immunity plays a pivotal role in preventing infections with SARS-CoV-2. While COVID-19 mRNA vaccines induce robust systemic immune responses in patients with inflammatory bowel disease (IBD), little is known about their efficacy in the mucosal immune compartment. In this subinvestigation of the ongoing STAR-SIGN study, we present the first analysis of mucosal immunity elicited by XBB.1.5 mRNA vaccines in immunocompromised patients with IBD.

**Methods:** IgG and IgA antibodies targeting the receptor binding domain of the SARS-CoV-2 JN.1 variant were quantified longitudinally in the saliva of IBD patients using the multiplex immunoassay MultiCoV-Ab. Antibody levels were quantified before and 2-4 weeks after vaccination with XBB.1.5 mRNA vaccines. All patients were treated with biologics or small molecules and previously received three doses with original COVID-19 mRNA vaccines.

**Results:** Mucosal IgG antibodies were readily induced by XBB.1.5 mRNA vaccines ($p$ = 0.0013 comparing pre- and post-vaccination levels; Figure 1A). However, mucosal IgA levels were comparable before and after vaccination ($p$ = 0.8233; Figure 1B). Consequently, mucosal IgG and IgA antibody levels correlated moderately before and after immunization (pre- vaccination: $r$ = 0.5294; $p$ = 0.0239; post-vaccination: $r$ = 0.4863; $p$ = 0.0407). Contrary to a previous report in healthy individuals, vaccination did not induce serum IgA in patients with IBD ($p$ = 0.5841 comparing pre- and post-vaccination levels). These data suggest that COVID-19 mRNA vaccines fail to elicit mucosal IgA in patients with IBD.

**Conclusions:** Since mucosal IgA plays a pivotal role in infection control, the lack of IgA induction indicates that patients lack sufficient protection against SARS-CoV-2 infections which warrants the development of mucosal COVID-19 vaccines.

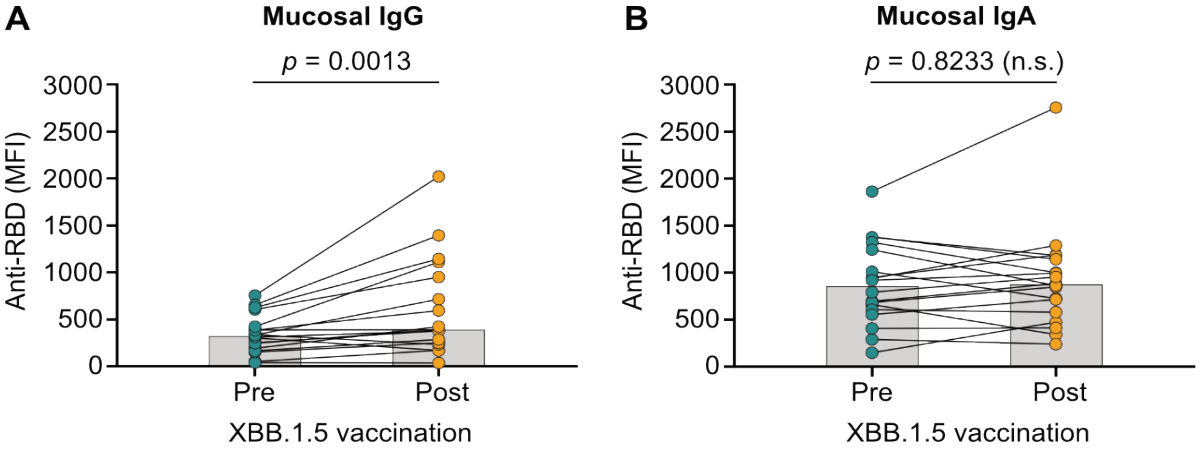


**Figure 1.** SARS-CoV-2 JN.1 variant-targeting mucosal immunity elicited by variant-adapted COVID-19 mRNA vaccines. Anti-receptor binding domain (RBD) IgG (A) and IgA (B) levels in saliva of patients with IBD presented as mean fluorescence intensity (MFI). Samples were collected before (Pre) and two to four weeks after (Post) receiving a fourth vaccine dose with XBB.1.5 mRNA vaccines. Median values are indicated by bars. Statistical analyses are based on exact Wilcoxon signed-rank tests.

## HEPATOLOGY ORAL PRESENTATIONS I

### Hepa1

### Intratumor heterogeneity is conserved in single cell-derived hepatocellular carcinoma organoids

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**Background:** Hepatocellular carcinoma (HCC) exhibits substantial intratumor heterogeneity, contributing to therapy resistance and recurrence. HCC organoids (HCCOs) have emerged as a powerful model that captures this heterogeneity. This study explores how heterogeneity is maintained in HCCOs over time and how it impacts therapeutic response.

**Methods:** To assess whether intratumor heterogeneity is preserved by single cells (sc), we isolated individual cells from HCCO cultures. These single cells were plated individually, allowing them to regenerate into organoids. The resulting single-cell-derived organoids (sc-HCCOs) were analyzed by immunohistochemistry (IHC) to evaluate the expression of liver cancer-related markers that were variably expressed in both the original HCCOs and the corresponding tumor biopsy. Furthermore, scRNA-sequencing of sc-HCCOs was performed to evaluate the extent of cellular heterogeneity in clonal outgrowths. Additionally, we assessed the proliferation rates of sc-HCCOs and their response to anti-cancer drugs to determine the impact of heterogeneity on drug sensitivity.

**Results:** sc-HCCOs reproduced the heterogeneity of tumor marker expression observed in the original HCCO lines, as demonstrated by IHC analysis. scRNA-sequencing revealed that, despite clonal in origin, sc-HCCOs largely retain the cellular diversity of the original HCCO. Additionally, sc-HCCOs exhibited variability in proliferation rates and response to anti-cancer drugs.

**Conclusions:** Our findings demonstrate that sc-HCCOs successfully reproduce tumor marker heterogeneity. While we observed some variability in proliferation rates and response to anti-cancer drugs among the sc-HCCOs, the extent of this variability was limited. These results suggest that while single-cell-

 

derived organoids retain certain aspects of tumor heterogeneity, the implications for functional diversity in terms of proliferation and drug response remain unclear. Further investigation is needed to better understand the underlying mechanisms and their relevance to the intratumoral heterogeneity of HCC.

## Hepa2

### Immune landscaping of Mc4rKO livers unveils immunosuppressive cell composition in hepatic crown-like structures in MASH

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**Background:** Inflammation drives the progression of metabolic dysfunction-associated steatotic liver disease (MASLD) to steatohepatitis (MASH) and hepatocellular carcinoma (HCC). We explored this transition in melanocortin-4 receptor knockout (Mc4rKO) mice, focusing on hepatic immune changes in MASH.

**Methods:** Male Mc4rKO mice were fed either normal chow (ND) or a Western diet (WD) for 20–25 weeks. Liver tissues from BL6 (control), Mc4rKO+ND (MASLD), and Mc4rKO+WD (MASH) mice underwent HE staining and bulk RNA sequencing. Transcriptomic-driven metabolic pathway analysis was performed and compared to human MASH data. Immune cell composition was assessed using solution and imaging mass cytometry.

**Results:** Mc4rKO+WD mice exhibited key histological and transcriptomic features of human MASH, including inflammation, metabolic disruption, and fibrosis. MASH livers were infiltrated by bone marrow-derived macrophages, $CD8^+$ T cells, and NK cells. Abundant hepatic crown-like structures (hCLSs) contained macrophages, neutrophils, B cells, and $CXCR6^+$ T cells, suggesting immune exhaustion.

**Conclusions:** The Mc4rKO model effectively replicates MASLD progression to MASH and offers a strong platform for translational research. The complex immune composition within hCLSs may contribute to an immunosuppressive environment, possibly involved in HCC development.

## Hepa3

### Assessment of hypervolemia using compression pressure of the external jugular vein in decompensated liver cirrhosis during passive leg raise and albumin infusion

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**Background:** Patients with decompensated cirrhosis are susceptible to iatrogenic hypervolemia. A pilot study using point-of-care ultrasound (POCUS) of the inferior vena cava (IVC) found severe hypervolemia after intravenous (IV) albumin in 20% of patients, despite following current guidelines. CMPX2 is a novel noninvasive device based on external jugular vein (EJV) compression to measure central venous pressure validated in intensive care, but its ability to predict post-albumin hypervolemia remains unstudied.

**Methods:** IVC diameters ($IVC^{min}$, $IVC^{max}$) and IVC collapsibility (IVCCI) using POCUS, and EJV compression pressures ($EJV^{min}$, $EJV^{max}$, $EJV^{mean}$) using CMPX2 were measured in parallel before and during passive leg raise (PLR), as well as before and after IV albumin. Hypervolemia was defined as $IVC^{max}$>2.1 cm and IVCCI<50%, and $EJV^{mean}$≥9 mmHg.

**Results:** In our prospective cohort of 20 patients (35% women, median age 62 years, mean BMI 25.7 kg/m2, 55% Child B, 80% paracentesis), all IVC diameters and EJV compression pressures increased during PLR and after IV albumin. Percentage changes in EJV compression pressures were higher than changes observed in IVC diameters during PLR (mean $EJV^{max}$ +88.4%/$EJV^{mean}$ +63% vs $IVC^{max}$+16%/$IVC^{min}$ +26%, all p <0.01). However, these changes were comparable after IV albumin infusion (mean $EJV^{max}$ +65.4%/ $EJV^{min}$ +78%, $EJV^{mean}$ +72% vs $IVC^{max}$ +58%/$IVC^{min}$ +79%). Post-albumin hypervolemia occurred in most cases (POCUS 65%, CMPX2 90%).

**Conclusion:** Both POCUS and CMPX2 detected significant volume changes during PLR and following IV albumin. CMPX2 appeared more sensitive to dynamic changes during PLR and identified more patients with post-albumin hypervolemia than POCUS, which may help individualize fluid management in decompensated cirrhosis.

## Hepa4

### Selective Targeting Of The Blood-Biliary Barrier Ameliorates Fibrotic and Cholestatic Liver Damage by Enhancing Bicarbonate Secretion and Bile Dynamics.

Felix A. Baier[1], Nicolas Melin[1], Teresa De Enrique[1], Tural Yarahmadov[1], Daniel Sánchez-Taltavull[1], Sheida Moghadamrad[2], Shaira Murugan[1], Adrian Keogh[1], Alex Odermatt[3], Cristina Gómez Castellà[3], Eric Feraille[4], Ali Sassi[4], Urban Deutsch[5], Britta Engelhardt[5], Mikio Furuse[6], Daniel Candinas[1], Deborah Stroka[1]

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**Background:** Tight junctions, which maintain the blood-biliary-barrier in the liver, have important biological functions that impact cholestatic diseases. In this study, we explored the potential of tight junction proteins as new therapeutic targets.

**Methods:** Mice were subjected to extra- and intrahepatic cholestasis via surgical ligation of the common bile duct (BDL) or chemically, with alpha-naphthyl isothiocyanate (ANIT). Hepatic necrosis and serum liver injury markers were determined. Tight junction protein expression was knocked down using liver specific GalNAc-siRNAs.

**Results:** Mice with tight junction gene deletion have increased bile-flow rate and reduced bile acid levels. Following BDL or ANIT, bile acid levels were significantly lower, and tissue injury was remarkably ameliorated in tight junction protein knockout mice. Liver specific knockdown of a using GalNAc-siRNAs ameliorated liver cholestasis and tissue injury.

**Conclusions:** Knockout or GalNAc-siRNA mediated inhibition of a tight junction protein protected the liver from cholestatic injury. Further pre-clinical and clinical studies will be conducted to explore the translational potential of this treatment approach.

 

## Hepa5

### Efficacy and Safety of Bulevirtide in Patients with Chronic Hepatitis D Treated under Early Access in Switzerland

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**Background & Aims:** Bulevirtide (BLV) 2 mg/day has recently been approved in Switzerland for the treatment of chronic hepatitis D virus (HDV). We present real-world data on efficacy and safety in patients treated under an early access program.

**Methods:** Retrospective, multicenter Swiss study including patients with HDV-associated compensated cirrhosis starting BLV therapy (2 mg/day) between Jan 2020 and Aug 2024.

**Results:** Fourteen patients received BLV for a median duration of 1.85 (1.1-2.1) years. Median age was 51.3 (43.9-58.5) years, and 71.4% were men. Baseline values included ALT 81 (55.8-88.8) U/L, platelet count 102.5 (67.3-141.3) G/L, liver stiffness (LSM) 15.3 (11.8-22.1) kPa and HDV RNA was 4.82 log10 (4.52-6.23) IU/mL. Biochemical, virological, and combined responses were observed in 50%, 64.3% and 35.7% at 6 months; 66.7%, 75% and 58.3% at 12 months; and 62.5%, 62.5% and 62.5%, at 24 months. Two patients (14.3%) developed HCC, and one patient (7.14%) was transplanted. No serious adverse events were reported.

**Conclusions:** In this real-world cohort of patients with compensated HDV cirrhosis, bulevirtide demonstrated favorable efficacy and safety. Longer-term follow-up is warranted to assess the impact on liver-related outcomes.

## Hepa6

### Antimicrobial Stewardship Significantly Improved The Antibiotic Appropriateness And Clinical Outcomes In Patients With Decompensated Cirrhosis At A Tertiary Care Center In Switzerland

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**Background:** Currently, Switzerland is less impacted by antimicrobial resistance (AMR) compared to many other countries within and outside of Europe. However, AMR remains a significant concern in patients with decompensated cirrhosis, where it adversely affects prognosis. Despite this, data on AMR in this population in Switzerland are limited. Given the variability in AMR across countries, antimicrobial stewardship programs are essential for promoting appropriate antibiotic use, but their role in the management of patients with cirrhosis requires further exploration.

**Method:** We evaluated adherence to and clinical impact of an antimicrobial stewardship implemented in 2019 at Inselspital, University Hospital of Bern, in patients with decompensated cirrhosis hospitalized with suspected or confirmed bacterial infections. We compared a pre- stewardship cohort from 2018 with a post- stewardship cohort from 2020.

**Results:** We analysed data from 124 patients with decompensated cirrhosis (55 pre-stewardship; 69 post- stewardship). The two groups had similar demography and severity of liver disease. In both groups, main types of infection were spontaneous bacterial peritonitis, pneumonia and urinary tract infection. Overall, nearly half of the infections were culture-positive; among these, 41% were caused by drug-resistant organisms and 21% by multidrug-resistant organisms (MDRs). The adherence to stewardship was 80%. Stewardship implementation resulted in improved appropriateness of initial antibiotic therapy (53 vs 77%, p = 0.004) and showed a trend of reduction of 30-day mortality (25 vs 14% p = 0.124). Patients who were treated according to the stewardship guidance had a significant lower 30-day mortality compared to patients treated in the pre-stewardship +/- those treated not following the stewardship guidance (26 vs 11%, p = 0.033).

**Conclusion:** Despite low national AMR rates, drug-resistant organisms and MDR infections are prevalent in patients with decompensated cirrhosis in Switzerland. Our findings suggest that stewardship can significantly improve antibiotic use and clinical outcomes in this vulnerable population.

 

## ENDOSCOPY ORAL PRESENTATIONS

### Endo1

#### Peroral Endoscopic Myotomy (POEM) for treatment of achalasia: Results from a Single-Center Prospective Study of 233 Patients at a Swiss Tertiary Referral Hospital

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**Background:** POEM has several advantages compared to laparoscopic Heller myotomy (LHM). Beside being less invasive, the natural antireflux barrier such as the ligamentum phrenico-oesophageale will stay intact. There is no limitation with regard to the length of the myotomy. Furthermore, double endoscope technique (DET) ensures a proper limited extension of the myotomy at the gastric side and prevention of cutting the collar sling fibers.

**Methods:** To analyze treatment success and reflux status following POEM all patients undergoing the procedure since 2011 were prospectively monitored. 6M after POEM follow-up endoscopy was routinely performed. A total of 233 pts (110f/123m) (49.9±17.3 years, range:13-86) with achalasia (I:48, II:149, III:36) underwent POEM. 27 pts (11.5%) had undergone prior LHM. Prior treatments with Ballon dilatation, BTX or both were documented in 89 pts (38.2%). The median Eckardt score (ES) before POEM was 7.85 ± 2.05. DET was implemented starting in 2015. Follow-up endoscopy at 6 months was conducted in 204 pts. Fifteen pts are scheduled for follow-up and 14 were lost to follow-up. Proton pump inhibitors (PPIs) were discontinued 1 month prior to the follow-up endoscopy.

**Results:** Length of myotomy ranged from 4 to 24 cm (mean: 12.07 ±4.50cm). Procedure time was: 34-209 min (mean: 83.4). Complications occurred in 3/233 (1.2%) pts. Treatment failures were managed with re-POEM (n = 5). At 6-month follow-up, 185 of 204 pts (90.7%) had an ES ≤3. Reflux symptoms were reported in 37 pts, and reflux esophagitis was observed in 83/204 patients (40%) (Grade A:74, B:7, C:2). PPI therapy was required in 93 of 204 pts (43%)

**Conclusion**: POEM is a very safe and highly effective treatment for patients with achalasia. Post POEM reflux can be minimized by a reflux preventive approach. POEM is currently the first line treatment for achalasia.

### Endo2

#### Prospective Evaluation of Traction-Assisted Closure with Tissue Inverted Clipping Strategy (TACTICS)-Assisted EFTR for Gastric GIST: A Single-Center Study of a Novel Full-Thickness Resection and Closure Technique

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**Background:** Endoscopic full-thickness resection (EFTR) is emerging as a minimally invasive alternative to laparoscopic wedge resection for small GISTs. One of the main challenges in EFTR is managing the full-layer gastric wall defect. Closure is typically performed after resection which presents drawbacks: (1) larger defects make it more difficult to grasp the margins for clipping, and (2) in the presence of a full-layer defect, $CO_2$ insufflation is ineffective.

**Methods:** The TACTICS concept combines (a) traction of the lesion using a flexible, multifocal snare system, and (b) alternating closure of the defect with clips before the lesion is fully resected. This preemptive closure allows for robust transmural sealing. Eleven patients (10 with gastric GIST and 1 with Schwannoma) underwent EFTR using TACTICS in a prospective, single-center study. The mean tumor size was 1.9 ± 0.69 cm. Outcomes were evaluated in terms of procedural safety, histology, and intervention time.

**Results:** Complete defect closure was achieved in all patients. In one case, additional clips were required 24 hours post-resection due to incomplete adaptation. The average procedure time was 178.7 ± 43.7 min. In two patients, a Trelumina sponge system was used. R0 resection was achieved in 8 of the 11 cases.

**Conclusion:** TACTICS appears to enhance the safety, precision, and control of EFTR for small gastric GISTs. It minimizes the risk of complications associated with full-layer defects. This approach may be particularly beneficial for lesions located at the cardia, lesser curvature, prepyloric area, or in patients with a history of abdominal surgery.

### Endo3

#### Endoscopic ultrasound-guided hepato-portal sampling in morbidly obese patients with metabolic dysfunction-associated fatty liver disease (MAFLD): pilot-trial for metabolic research and biomarker assessment. Study Protocol

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**Background:** Metabolic dysfunction-associated fatty liver disease (MAFLD), formerly named non-alcoholic fatty liver disease (NAFLD), poses a major health and economic burden to all societies. Pathophysiological hallmark for development and progress of MAFLD has been proposed to relate to gut-derived metabolites although direct human data are lacking. Portal and hepatic circulation has been proposed to be safely accessible using endoscopic ultrasound (EUS). EUS-guided needle access of the portal vein is performed clinically at select tertiary centers for measurement of portal pressure gradients in patients with chronic liver disease and sampling of portal venous thrombus/blood to diagnose malignancy as well as finding biomarkers for metabolic/hepatic diseases.

**Objectives:** Characterize the portal venous metabolome in conjunction with liver tissue gene expression and histopathological profile in patients with metabolic dysfunction-associated fatty liver disease (MAFLD) via endoscopic ultrasound (EUS)-based sample acquisition (liver biopsy, hepato-portal blood sampling).

**Outcome:** Primary outcome will be the metabolic signature in portal-venous blood and the differences compared to hepato- and peripheral venous metabolic signature.

**Measurements and procedures:** In this pilot study, during EUS and under direct visualization i) blood will be withdrawn from an intrahepatic portal vein as well as hepatic vein via 22G fine-needle aspiration ii) liver biopsy will be performed via 19G fine needle biopsy and iii) shear wave elastography will be assessed. Moreover, a duodenal mucosa biopsy will be taken during endoscopy and blood from peripheral vein withdrawn.

 

**Outlook:** Our approach may complement and enhance the analysis of peripheral blood samples, which is known as "liquid biopsy" that has recently emerged as a promising tool for diagnosis, risk stratification, disease monitoring, and ultimately, personalized treatment recommendations.


– Trikudanathan G et al. Gastrointestinal endoscopy 2017
– Christopher G. Chapman, Irving Waxman et al. Pancreatology 2020


## Endo4

### Practices and Perspectives on Prophylactic Pancreatic Stent Placement: The PIRATE Survey


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**Background:** Prophylactic pancreatic stent placement (PPSP) is recommended in high-risk patients during endoscopic retrograde cholangiopancreatography (ERCP) to prevent post-ERCP pancreatitis (PEP). However, only two guidelines, including the European Society of Gastrointestinal Endoscopy (ESGE), provide advice on how, when, and if PPS should be removed. The ESGE recommends evaluating stent passage within 5–10 days and endoscopic removal, with stents remaining in place for a minimum of 12–24 hours. Literature indicates that 80–90% of PPS pass spontaneously, with few complications of non-removal reported. Documented complications of PPS removal, although rare, include perforation, bleeding, stent fracture, migration, and occlusion. This survey aimed at interrogating practice of PPSP and removal.

**Methods:** A 13 item online survey distributed via social media was conducted between November 2024 and February 2025.

**Results:** 322 valid responses were collected (Europe: 190; International: 15). Respondents were categorized by annual ERCP volume: <300 (31.2%), 300–500 (30.7%), and >500 (38%). 80% of respondents did not routinely place a PPS in high-risk patients or after unintentional PD cannulation. PPS placement was most indicated after multiple PD cannulations (80%) or papillectomy (58%). Additional indications included precut sphincterotomy, accidental PD opacification, and therapeutic PD interventions. Straight stents were used by 75%, with monopigtails utilized by 41.2%. The most commonly utilized stents were 5 French (85%) and 5 cm in length (60.2%). Survey respondents reported removal times ranging from within one week (45.6%) to up to four weeks (44.8%), with 60% using gastroscopy after radiographic confirmation of lack of spontaneous passage. Only 13.6% employed ultrasound. Over half (56%) did not schedule fixed appointments for stent retrieval.22% of respondents reported complications of non-removal, including pancreatitis (67%), perforation (11.9%), PD aberrations (39%), and stent migration (4%). Despite these findings, 97.8% considered complications of PPS to be rare. While 75% followed ESGE or internal guidelines and believed that PPS should be removed despite spontaneous passage occurring in 80–90% of cases. 25% of respondents did not refer to any guidelines.

**Conclusions:** This survey underscores the variability in PPSP practices and the limited guidance on removal timing and strategies. While with minimal complications, adherence to standardized practices could further improve patient outcomes and reduce complications.

## Endo5

### Endoscopic remission prevents development of complicated disease course in eosinophilic esophagitis patients


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**Background:** Eosinophilic esophagitis (EoE) is a chronic T2 esophageal inflammation that progresses to fibrostenosis when left untreated. Treatment options aim at controlling clinical and histological activity. It remains elusive whether (long-term) endoscopic disease control, can prevent development of disease complications, and if endoscopy could substitute histological assessment.

**Methods:** We evaluated prospectively included patients in the Swiss EoE cohort. Data on all patients with ongoing maintenance treatment, no concomitant gastroesophageal reflux, no strictures at baseline, and >2 follow-up visits were analyzed. We compared patients with ongoing endoscopic activity vs patients with endoscopic disease control, with regards to development of disease complications over time (strictures, bolus impactions and need for treatment escalation). Ongoing endoscopic activity was defined by an EREFS score of >2 during all follow-up visits.

**Results:** We included a total of 155 patients with a median follow-up of 55.0 months (69.0% males, median age 39.0 years). 112 patients were classified as having disease control during follow-up (72.3%), while 43 patients (27.7%) showed ongoing endoscopic activity. Development of complications occurred in a total of 113 patients (72.9%), significantly more often in patients with ongoing endoscopic activity compared to patients with disease control (93.0% vs 65.2%, p <0.001). This difference was mainly due to higher rates of stricture formation and need for treatment escalation. Multivariate Cox regression models revealed ongoing endoscopic activity as a significant predictor for the development of complications (HR 2.42, p <0.001), particularly development of strictures (HR 5.12, p = 0.002). Trajectories according to disease activity were more distinct when assessed by endoscopy compared to histology.

**Conclusion:** Ongoing endoscopic activity predicts development of complicating disease course in EoE patients. Treatment strategies should aim at controlling endoscopic activity to prevent disease complications. Endoscopy could potentially substitute histological assessment.

**Endo6**

### Quality indicators of EUS-guided liver biopsy: A single-centre experience

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**Background:** Endoscopic ultrasound-guided liver biopsy (EUS-guided LB) and fine needle aspiration (FNA) are effective techniques for obtaining tissue samples in liver disease and focal liver lesions. Preliminary evidence supports their feasibility and safety. Adequate biopsy is defined by EASL as core length ≥15 mm and ≥6 complete portal tracts (CPTs), whereas AASLD defines optimal biopsy as ≥20 mm and ≥11 CPTs.

**Methods:** In this retrospective single-centre study (January 2024 to March 2025), 16 patients underwent EUS-LB using a 19G Franseen tip needle with wet heparinised suction. In addition, 12 patients underwent EUS-FNA for focal liver lesions using 19G or 22G needles with dry or wet suction techniques. The primary outcome was specimen adequacy in EUS-LB. Secondary endpoints included total sample length (TSL), longest sample length (LSL) and number of CPTs for EUS-LB, and diagnostic performance for malignancy in EUS-FNA.

**Results:** EUS-LB met specimen adequacy criteria in 93.8% and 68.7% of cases based on EASL and AASLD standards. Median TSL was 58.5 mm (IQR 34.5–84.5), median LSL 15.5 mm (IQR 12.5–25.0) and median number of CPTs 13.0 (IQR 8.5–20.0). In the EUS-FNA group, sensitivity and specificity for detecting malignant lesions was 80% and 100% (n = 10 lesions). No serious adverse events were observed.

**Conclusions:** EUS-guided liver biopsy is a safe and effective technique, achieving high specimen adequacy comparable to previously published data (1). EUS-FNA demonstrates excellent diagnostic accuracy for identifying malignancies in focal liver lesions.

1 Facciorusso A, et al. Expert Rev Gastroenterol Hepatol. 2022 Jan;16(1):51-57

## GASTROENTEROLOGY ORAL PRESENTATIONS

**Gastro1**

### Eosinophil subset dynamics and transcriptional signatures in colorectal cancer progression

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**Background:** Colorectal cancer (CRC) remains a major cause of cancer mortality. Eosinophils, though known for roles in allergy, are emerging as immune regulators in CRC, but their stage-specific functions are unclear. This study assessed eosinophil subset dynamics and functions across CRC progression using murine models and human datasets.

**Methods:** We used an early-stage adenoma mouse model and a late-stage organoid-based CRC model to study eosinophils in the tumor microenvironment (TME). Using single-cell RNA sequencing (scRNA-seq) and functional assays, we characterized eosinophil subsets, gene expression, and TME interactions, with findings compared to newly generated patient-derived eosinophil scRNA-seq data.

**Results:** Eosinophils were enriched in early adenomas with their depletion increasing adenoma burden, thus indicating a protective role. In late-stage models, anti-IL-5-treatment increased incidence of metastasis and decreased survival. scRNA-seq and flow cytometry showed expansion of immunosuppressive Spp1+ tumor-associated macrophages (TAMs) without eosinophils. Mechanistically, eosinophils responded to tumor cues, became activated, and inhibited Spp1+ TAMs differentiation. Human CRC samples showed conserved eosinophil activation and gene signatures. The intratumoral eosinophil signature suggests roles in immunomodulation and extracellular matrix remodeling. Patient TMA analysis showed eosinophil decline with CRC stage, but increased PD-L1 expression.

**Conclusions:** Eosinophils show stage-specific functions in CRC. Their depletion promotes tumor progression and liver metastases, revealing a key eosinophil–macrophage axis and offering novel therapeutic insights.

**Gastro2**

### Rising Incidence of Helicobacter pylori Antibiotic Resistance in Eastern Switzerland: HARRiS Trial – An Interim Analysis

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**Background:** Helicobacter pylori (HP) eradication is essential due to its key role in gastric mucosa carcinogenesis, with rising gastric cancer incidence underscoring the need for effective treatment. Current European guidelines recommend empiric clarithromycin-based regimens only when local resistance rates are below 15%. However, resistance data from Switzerland are lacking. Tailored therapy guided by non-invasive, stool-based molecular resistance testing may improve eradication rates, support antibiotic stewardship, minimize unnecessary antibiotic exposure, and enhance patient adherence.

**Methods:** Sixty-five consecutive patients, aged 25–75 years, 61% female, from our endoscopy unit with positive HP rapid urease tests underwent phenotypic resistance testing for amoxicillin (AMO), clarithromycin (CLA), tetracycline (TET), levofloxacin (LEV), rifampicin (RIF), and metronidazole (MET). Parallel stool samples were collected for molecular resistance analysis to CLA. Results were combined to assess resistance rates and concordance between phenotypic and molecular methods. The study is powered for 135 patients; this represents an interim analysis.

 

**Results:** Interim data (n = 65) revealed resistance rates of 0% for AMO and TET, 23% for CLA, 14% for LEV, 25% for RIF, and 27% for MET.

**Conclusions:** High resistance rates to CLA, MET, LEV and RIF may compromise the efficacy of empirical triple or quadruple therapy. A test-and-treat approach guided by molecular stool testing appears promising for personalized HP treatment. Ongoing analysis will further explore the concordance between gastric biopsy-based and stool-based resistance detection.

## Gastro3

### Cyp2s1-dependent modulation of the intestinal metabolome and microbiome

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**Background:** Environmental toxins associated with inflammatory bowel disease (IBD) are metabolized by hepatic cytochrome P450 enzymes. Notably, Cyp2s1, an orphan P450 cytochrome with predominant expression in the intestine, oxidizes xenobiotics such as dioxin and endogenous derivates including fatty acids. Yet, its relevance in IBD remains to be explored.

**Methods:** By using transgenic mouse lines lacking or overexpressing Cyp2s1 in intestinal epithelial cells (IEC) we are going to assess Cyp2s1 impact on colitis development. Moreover, untargeted metabolomics and shotgun microbiome sequencing will help elucidate Cyp2s1 effect on the gut metabolome and microbiome.

**Results:** Our results demonstrate high Cyp2s1 expression in intestinal epithelial cells. Moreover, we observed decreased Cyp2s1 expression in inflammatory conditions, including IBD patient biopsies and colitis experimental models (DSS, CD40, TNBS, and *C.rodentium* infection). The treatment of colon-derived mouse organoids and Caco2 cells with the aryl hydrocarbon receptor (AhR) agonist, 6-Formylindolo[3,2-b]carbazole (FICZ) induced Cyp2s1 expression, indicating that Cyp2s1 is an AhR target gene. Mice overexpressing Cyp2s1 in IEC, exhibited alterations in the fecal metabolomic and microbial composition, characterized by reduced microbial richness and notable expansion of *Akkermansia muciniphila*. Following the DSS challenge, these mice showed more severe colitis symptoms compared to their littermate controls.

**Conclusions:** Our findings reveal Cyp2s1 as a target gene of AhR with a distinct function within the intestinal compartment, highlighting its potential as a novel therapeutic target in IBD.

## Gastro4

### A2 beta casein milk and its impact on histological disease activity and on in-vitro models of eosinophilic esophagitis

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**Background:** Eosinophilic esophagitis (EoE) is a food allergen driven chronic T2 inflammatory disorder of the esophagus with milk being the most frequently identified food culprit. As increasing prevalence of EoE parallels industrial changes in dairy production, one may assume a causal association. In fact, a dominant point mutation in beta casein occurred in ancestors to modern type cattle with a shift from A2 milk (original non-mutated beta casein) to A1 milk (with at least one point mutation). As of yet, nothing is known about the allergenic potential of A1 vs A2 milk and its implications in the pathogenesis of EoE.

**Methods:** This was an analysis of patients with proven milk-induced EoE that underwent 3 months challenge with commercially available A2 milk (300mL per day) in the Swiss EoE cohort. To assess milk type's allergenic potential, rat basophil leukemia (RBL) cell model was used. Local response to A1 vs A2 milk was assessed using ex vivo allergen stimulation models.

**Results:** We identified 12 patients with proven milk-induced EoE that underwent A2 milk exposure and were compliant (7 males, median age 38.9 years). 11 patients used A2 milk exposure as a maintenance treatment (median A2 milk exposure of 13.9 weeks, IQR 10.3-15.5). Histological remission was maintained in 7 patients (63.6%), partial remission (only distal eosinophilia) in 1 patient (9.1%), and failure was seen in 3 patients (27.3%). Peak eosinophil counts decreased significantly under milk elimination diet compared to active disease without diet (50, 38-66 vs 0, 0-6 eos/hpf, p = 0.001), but did not increase under A2 exposure (0, 0-13 eos/hpf). Standard milk and A2 milk showed similar amount of histamine release in the RBL cell model. Milk-induced IL5 secretion was significantly attenuated by A2 milk in an in-vitro stimulation model using esophageal biopsies, but not PBMCs.

**Conclusion:** Our study identifies - for the first time – not only a food category but one specific food protein as a potential culprit allergen in the pathogenesis of EoE.

## Gastro5

### A transcriptional atlas of gut-innervating neurons reveals activation of interferon signaling and ferroptosis during intestinal inflammation

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**Background:** Enteric infections frequently lead to chronic gastrointestinal sequelae, including symptoms such as abdominal pain, discomfort, and irritable bowel syndrome. The wide range of sensory disturbances suggests that gut-innervating neurons may be directly affected by inflammation. However, transcriptomic profiling of these neurons has been limited by challenges in isolating neuronal populations from inflamed gastrointestinal tissue.

**Methods:** To overcome these limitations, we utilized a genetically encoded nuclear GFP tag selectively activated in neurons,

 

allowing for fluorescence-based sorting and purification of both intrinsic and extrinsic gut-innervating neurons during intestinal inflammation. We then performed bulk and single-nucleus RNA sequencing to comprehensively characterize neuronal gene expression under inflammatory conditions.

**Results:** Our analysis revealed a conserved transcriptional response in neurons during inflammation, notably marked by activation of the interferon signaling and ferroptosis pathways. Functional studies demonstrated that deletion of the interferon receptor 1 (Ifnar1) in neurons modulated ferroptosis, prevented neuronal loss, and improved gastrointestinal transit time.

**Conclusions:** Our study provides a valuable transcriptomic resource highlighting neuronal adaptation to intestinal inflammation. Furthermore, it identifies interferon signaling and ferroptosis as key pathways activated in enteric neurons, offering potential targets for therapeutic intervention in post-infectious gastrointestinal disorders.

**Gastro6**

### Establishing Reference Intervals for Area Under the Curve and Slope in Gastric Emptying Scintigraphy using the Mixed Nottingham Test Meal

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**Background:** Gastric emptying scintigraphy (GES) remains the gold standard for assessing gastric emptying (GE), yet clinical interpretation largely relies on static retention values. The Mixed Nottingham Test Meal (Mixed-NTM), incorporating both liquid and solid components, enables a modular approach to GES. However, dynamic parameters such as area under the curve (AUC) and slope, which could enhance characterization of GE, lack established reference values.

**Methods:** Twenty-four extensively screened and phenotyped healthy volunteers underwent GES following the Mixed-NTM protocol. Retention values were recorded at 0, 30, 60, 90, and 120 minutes. AUC was calculated using trapezoidal approximation, including an AUC up to half-emptying time ($T_{50}$). Slope was defined as the highest absolute decline between consecutive time intervals. Reference intervals (RI) were determined using percentile and bootstrapping techniques (n = 2000 samples).

**Results:** The proposed 90% RI for the highest absolute slope ranged from 0.85 to 1.85. The AUC at 120 minutes ranged from 30.00% to 65.00%, and AUC at $T_{50}$ from 10.00% to 45.00%. Early time-point AUC RI were also established: 15.00–22.50% (30 min), 25.00–37.50% (60 min), and 30.00–52.50% (90 min).

**Conclusions:** This study introduces normal RI for AUC and slope metrics derived from a standardized Mixed-NTM GES protocol. These values establish a baseline for evaluating gastric emptying dynamics and form the foundation for future diagnostic thresholds in clinical settings. Further research is required to validate these intervals in symptomatic populations.

## HEPATOLOGY ORAL PRESENTATIONS II

**Hepa7**

### Validation of Lille Model at day 4 in patients with severe alcoholic hepatitis

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**Background:** Patients with severe alcoholic hepatitis (SAH) requires prednisone therapy. However, this treatment increases infection risk, with a 28-day cumulative incidence of approximately 20%. Identifying non-responders to corticosteroids early is crucial to define stopping rules and reduce unnecessary exposure. The Lille model (LM) allows clinicians to predict poor response to corticosteroids at seven days of therapy. To mitigate infection risk, we evaluated the performance of the Lille Model at day 4 (LM4) compared to day 7 (LM7) and assessed its ability to predict mortality in patients with SAH.

**Patients and Methods:** We performed a retrospective analysis of patients hospitalized in HUG with liver biopsy proven SAH between 12/2016 and 08/2024. Response to corticosteroids was assessed with LM4 and LM7, according to the validated cutoff value (responder defined as CUV<0.45). The outcome, evaluated at 3 months, was defined as death or liver transplantation. Numerical variables are presented as medians with interquartile ranges ($25^{th}$-$75^{th}$ percentiles).

**Results:** Among the 64 patients included in the study, median age was 54 (49-59) with 67% of men. Maddrey's score was 62 (47-73), MELD was 22 (20-25) and 53 patients had ascites at admission. The median value for LM4 was 0.36 (0.11-0.57) versus 0.35 (0.11-0.65) for LM7 (p = 0.87). Among the 38 patients responder according to LM7, 37 were also responder with LM4. Among the 26 patients not responder with LM7, 21 patients were also not responder with LM4. Pearson's correlation between LM4 and LM7 was 0.944 (p <0.001). Three-month mortality was 33% varying from 16% in LM7 responder to 58% in LM7 non-responder (p = 0.001). According to LM4, mortality at 3 months was 21% in LM4 responder and 55% in non-responder (p = 0.009). The ROC curves of LM4 and LM7 to predict mortality at 3 months were 0.753 (0.528-0.878) and 0.765 (0.644-0.887), respectively (p = 0.893).

**Conclusion**: LM4 could be used instead of LM7 for predicting response to corticosteroid therapy in patients with SAH. Assessing the efficacy of prednisolone at an earlier time point may avoid futile prolongation of corticosteroids.

**Hepa8**

### Monocyte Distribution Width as a Novel Biomarker for Assessing Disease Severity in Liver Cirrhosis

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**Background:** Monocyte distribution width (MDW) is a promising biomarker that reflects monocyte activation and has shown

 

clinical value in early detection and severity assessment of sepsis. In advanced stages of cirrhosis, immune dysfunction is common and contributes to sepsis-related morbidity. Here, we sought to evaluate MDW in patients with cirrhosis in relation to disease severity.

**Methods:** Blood samples were obtained from patients with cirrhosis (Child A, n = 33/ B, n = 25/ C, n = 12) at the Cantonal Hospital St. Gallen and (Child A, n = 40/ B, n = 29/ C, n = 4) at the University Hospital Basel, compared to healthy controls (n = 13 and 23) and analysed using flow cytometry. MDW was assessed retrospectively and defined as the FSC-W standard deviation of the monocyte population based on CD14/CD16/HLA-DR expression profiling in FlowJo.

**Results:** In the patient cohort from St. Gallen, we observed a significant correlation of MDW with different cirrhosis severity scores (Child Pugh [p = 0.03, r = 0.24], MELD [p = 0.03, r = 0.24] and ALBI [p = 0.02, r = 0.27]) and a parameter of liver synthesis (albumin, p = 0.04, r = -0.24) and portal hypertension (HVPG, p = 0.01, r = 0.41). In the independent validation cohort from Basel, we confirmed correlations with disease severity scores (Child Pugh [p = 0.05, r = 0.23], MELD [p = 0.04, r = 0.26]). Additionally, we found an association of MDW with the C-reactive protein (CRP, p = 0.01, r = 0.32) and international normalized ratio (INR [p = 0.02, r = 0.3]).

**Conclusions:** In two independent cohorts of patients with cirrhosis, we demonstrated correlations of MDW with disease severity scores, liver synthesis and portal hypertension suggesting that MDW might be a biomarker indicating disease severity. Future investigations will assess MDW longitudinally in patients with acutely decompensated cirrhosis and its relation to survival and complications.

## Hepa9

### MAIT cell depletion and dysfunction in patients with portal hypertension undergoing TIPSS

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**Background:** Mucosal-associated invariant T (MAIT) cells represent the most abundant T cell type in the human liver. These innate-like T cells respond to bacterial riboflavin metabolites presented by MHC- like molecule MR1, with 5-OP-RU being the most potent antigen (Ag). MAIT cells have immune-regulatory, anti-bacterial as well as profibrogenic functions. We previously identified elevated MAIT cell stimulatory ligands in the sera of patients with portal hypertension. Whether these affect portal blood MAIT cell phenotype and related pathogenic pathways is unknown.

**Methods:** We examined the phenotype of unstimulated, Ag-, *E. coli*- and cytokine-stimulated MAIT cells (and innate-like γδ T cells for comparison) in portal and peripheral blood of patients undergoing transjugular intrahepatic portosystemic shunt (TIPSS) placement, and in peripheral blood of sex- and age-matched healthy subjects, using multiparameter spectral flow cytometry. Data were analyzed using hierarchical clustering and tSNE dimension reduction.

**Results:** MAIT cells were strongly depleted in patients with portal hypertension in both peripheral and portal blood compared to healthy subjects, whereas γδ T cells showed a relative increase. The remaining MAIT cells showed an impaired responsiveness to 5-OP-RU, *E. coli* and cytokines with reduced expression of activation markers and lower cytokine production. γδ T cells in patients remained functional.

**Conclusions:** Our findings highlight the depletion of MAIT cells in patients undergoing TIPSS, with remaining MAIT cells showing signs of exhaustion. This contrasts with the preserved numbers and functionality of γδ T cells. Depletion of MAIT cells may be linked to a leaky intestinal barrier and increased availability of stimulatory bacterial ligands. Reduced MAIT cell frequency and functional changes may contribute to the state of compromised immunity and increased susceptibility to infection characteristic of decompensated cirrhosis and portal hypertension.

## Hepa10

### Impact of Loss of PCSK9 Expression in Hepatocytes

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**Background:** PCSK9 plays a key role modulating circulating low-density lipoproteins (LDL) levels by regulating LDL receptor (LDLR) expression on hepatocytes. Inhibition of PCSK9 impairs LDLR degradation, allowing greater hepatocyte LDL uptake. Currently, monoclonal antibodies and liver specific small-interfering RNAs targeting PCSK9 are clinically used to treat patients with hypercholesterolemia. Here, we questioned the impact of long term PCSK9 inhibition in the liver, with a focus on LDL metabolism and sex-associated differences.

**Methods:** We used a PCSK9 KO mouse model. Liver samples were collected from male and female mice and embedded for histology or snap frozen for RNAseq. Bile acid levels were measured using a commercial kit. Cellular respiration was assessed measuring OCR. Liver regeneration was studied using the 2/3 partial hepatectomy (PHx) surgical model.

**Results:** PCSK9 KO livers of both sexes displayed no damage or increase in LDL accumulation. Moreover, RNA expression showed an upregulation of fatty acid, steroid and amino acid catabolism, explaining the lack of LDL accumulation. Female PCSK9 KOs also had an upregulation of bile acid production, further promoting cholesterol clearance. Male PCSK9 KOs had a substantial upregulation of genes involved in cellular respiration to deal with fatty acid catabolism biproducts. In addition, there were changes in mitochondria morphology and an upregulation of an oxidative stress response. We examined aged male PCSK9 KO mice and observed an accumulation of ROS and DNA oxidation (8-oxo-dG). Challenged with a PHx, these hepatocytes did not proliferate; but increased the liver size by hypertrophy and displayed steatosis.

**Conclusions:** PCSK9 KO livers are metabolically challenged in a sex specific manner. Further studies on the long-term effects on the liver are warranted for hypercholesterolemia PCSK9-targeted treatments.

 

## Hepa11

### A HEV ORF2 protein-mediated mechanism of hepatitis E-associated kidney disease

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**share first authorship*

**Background:** Hepatitis E virus (HEV) infection, one of the most common forms of hepatitis worldwide, is often associated with extrahepatic, particularly renal, manifestations. While underlying pathomechanisms are still largely unknown, these manifestations are expected to develop either directly, i.e. by HEV infection of the respective organs or indirectly, i.e. by immunologic reactions. Here, we describe the development of de novo immune complex-mediated glomerulonephritis (GN) associated with the glomerular deposition of a newly described HEV capsid protein in a patient with chronic hepatitis E, and similarly in patients with acute hepatitis E.

**Methods:** We performed immunostaining, electron and deconvolution microscopy, and combined laser-capture microdissection with mass spectrometry to specifically investigate the glomerular compartment.

**Results:** In a kidney transplant recipient with chronic hepatitis E, we showed that GN developed in parallel with increasing glomerular deposition of the HEV open reading frame 2 (ORF2) capsid protein, which significantly co-localizes with IgG to form HEV-associated immune complexes. Interestingly, the glomerular HEV ORF2 protein does not correspond to the expected secreted and glycosylated form of the viral capsid protein but rather has the molecular weight of a truncated non-glycosylated form. Importantly, the glomerular HEV ORF2 protein is not associated with HEV RNA and, in contrast to liver cells, no productive HEV infection of kidney cells was detected. Patients with acute hepatitis E show similar but less pronounced deposits. Our results establish a link between the production of HEV ORF2 protein and the development of hepatitis E-associated GN in the immunocompromised state.

**Conclusions:** The formation of glomerular IgG-HEV ORF2 immune complexes discovered here provides a potential mechanistic explanation of how the hepatotropic HEV can cause variable renal manifestations. These findings directly provide a tool for etiology-based diagnosis of hepatitis E-associated GN as a distinct entity and suggest therapeutic implications.

## Hepa12

### Post-Banding Ulcer Bleeding After Endoscopic Ligation: Incidence, Risk Factors, and Outcomes in Patients with Cirrhosis

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**Background:** Esophageal variceal bleeding (VB) is a major complication of liver cirrhosis and portal hypertension and is related with significant mortality (10-15% at six weeks). Post-banding ulcer bleeding (PBUB) is a complication of endoscopic band ligation (EBL), the gold standard endoscopic procedure used in the prevention and treatment of VB. The aim of this study is to investigate the incidence, mortality and risk factors of PBUB.

**Methods:** Monocentric retrospective cohort study conducted at the university hospital of Bern (Switzerland), a tertiary care center. This study included patients with cirrhosis and esophageal varices, who underwent prophylactic or urgent EBL for acute VB between 1 January, 2018 and 31 December, 2022.

**Results:** 206 patients with cirrhosis, who underwent 630 sessions of EBL were included. The incidence rate of PBUB was 17.5% (95% CI, 12.7%–23.5%), considering the total number of patients, and 6.8% (95% CI, 5.0%–9.2%) considering the total of EBL procedures. Urgent EBL for acute VB (SHR: 2.78, 95% CI: 1.29–6.00, p = 0.009) and elevated creatinine (SHR: 1.04, 95% CI: 1.01–1.07, p = 0.024) were independent risk factors for PBUB on multivariate analysis. PBUB required blood product transfusions in 88.1% of events (95% CI, 73.6%–95.5%) and hospitalization at the intensive care unit in 74.4% of events, with a median hospital stay of 2 days (range: 1–34 days). In patients with PBUB, the short-term mortality during hospitalization was 19%, and long-term mortality at 52 weeks was 64%.

**Conclusions**: Patients with cirrhosis undergoing urgent EBL for acute VB and those with elevated creatinine levels are at increased risk of PBUB. PBUB significantly affects mortality in patients with cirrhosis, emphasizing the critical need for improved risk identification and stratification.

 

## SGVC LARGIADÈR SESSION

### SGVC1

#### Combined tumor-associated microbiome and immune gene expression profiling predict response to neoadjuvant chemo-radiotherapy in locally advanced rectal cancer

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**Background:** Locally advanced rectal cancer (LARC) is treated with neoadjuvant chemo-radiotherapy (nCRT) followed by surgery. A minority of patients show complete response (CR) to nCRT, and may avoid surgery and its functional consequences. Instead, most patients show non-complete response (non-CR) and may benefit of additional treatments to increase CR rates. Reliable predictive markers are lacking. Aim of this study was to identify novel signatures predicting nCRT responsiveness.

**Methods:** We performed combined analysis of tumor-associated microbiome and immune gene expression profiling of diagnostic biopsies from 70 patients undergoing nCRT followed by rectal resection, including 16 with CR and 54 with non-CR. Findings were validated by an independent cohort of 49 patients, including 7 with CR and 42 with non-CR.

**Results:** Intratumoral microbiota significantly differed between CR and non-CR groups at genus and species level. Colonization by bacterial species of *Ruminococcus* genera consistently associated with CR, whereas abundance of *Fusobacterium*, *Porhpyromonas*, and *Oscillibacter* species predicted non-CR. Immune gene profiling revealed a panel of 59 differentially expressed genes and significant upregulation of IFN-gamma and -alpha response in patients with CR.

**Conclusions:** Integrated microbiome and immune gene profiling analysis unraveled clustering of microbial taxa with each other and with immune cell related genes and allowed the identification of a combined signature able to correctly identify non-CRS in both cohorts. Thus, combined intratumoral microbiome-immune profiling improves prediction of response to nCRT. Correct identification of unresponsive patients and of bacteria promoting responsiveness might lead to innovative therapeutic approaches based on gut microbiota pre-conditioning to increase nCRT effectiveness in LARC.

### SGVC2

#### Modelling cell–cell communication reveals progranulin as a driver of liver regeneration

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**Introduction:** Liver regeneration after an injury is essential for restoring its mass and function. The central element in this process is the proliferation of hepatocytes, which need to be in coordination with the non-parenchymal cells of the liver.

**Methods:** To identify the signals that lead to hepatocyte proliferation, we developed a mathematical model of cell communication. The model was informed with single-cell RNA-seq data of liver regeneration following a partial hepatectomy to calibrate its parameters.

**Results:** The model identified Grn as a key gene expressed by macrophages to signal hepatocytes to proliferate. To experimentally validate the results of the model, we performed a partial hepatectomy on a Grn knockout mouse, which showed impaired proliferation.

**Conclusion:** This study has used the combination of temporally resolved single cell expression data with mathematical modeling to identify progranulin as a novel signaling molecule required for liver regeneration.

### SGVC3

#### Recipient donor sex combination association with infections after solid organ transplantation – A Swiss Transplant Cohort Study

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**Background:** Infections contribute to morbidity and mortality after solid organ transplantation (SOT). The effect of recipient and donor sex combination (RDSC) on these events remains poorly investigated.

 

**Methods:** Adult (≥18 years) kidney, liver, lung or heart recipients (May 2008 - December 2021) were extracted from the Swiss Transplant Cohort Study. Follow-up was considered up until December 2022. Multiorgan transplantation, retransplantation or invalid consent were excluded. Primary endpoint was the incidence of clinically significant infections ≤365 days post-transplant. The cohort was split into four RDSC groups. Descriptive characteristics and incidence rate (IR) were compared. A time-to-event analysis of the first infection was performed, treating death and graft-loss as competing risks.

**Results:** From six centers 5032 patients were included: 408 heart, 2886 kidney, 1222 liver and 516 lung transplant recipients. Living donor grafts were transplanted in 1250 (24.8%) recipients. The cohort was categorized into 859 female-donor-female-recipients (FDFR), 876 male-donor-female-recipients (MDFR), 1528 female-donor-male-recipients (FDMR) and 1769 male-donor-male-recipients (MDMR). At least one infectious episode was observed in 2774 (55.1%) patients composing of: ≥1 bacterial event in 1848 (36.7%), ≥1 viral in 1562 (31.0%), ≥1 fungal in 329 (6.5%), and ≥1 parasitic in 37 (0.7%) patients. The crude annual IR across all organ types (0.56; 95%CI:0.54,0.57) was significantly different between RDSC (FDFR 0.60 (95%CI:0.57,0.63), MDFR 0.60 (95%CI:0.56,0.63), FDMR 0.53 (95%CI:0.50,0.55) and MDMR 0.54 (95%CI:0.52,0.56); Gray test = 23.8, p-value <0.01). A significant difference between RDSC was seen in kidney (Gray test = 37.36, p <0.01), with no difference in heart (Gray test = 4.00, p-value = 0.3), in liver (Gray test = 0.51, p-value = 0.92), and lung (Gray test = 1.59, p-value = 0.66) recipients.

**Conclusions:** An organ-dependent univariable association of RDSC was observed regarding infectious events. In the future, these characteristics might be considered in the early post-operative management of potential infectious complications of SOT recipients.

## SGVC4

### Peritoneal Macrophage-Derived Plasma Fibronectin Enhances Remote Skin Wound Healing

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**Background:** Large peritoneal macrophages (LPMs), located in the peritoneal cavity, are essential for local tissue repair. However, their contribution to tissue repair at distant sites remains unclear. This study investigates the role of LPM activation in skin wound healing at remote sites

**Methods:** A novel mouse model combining peritoneal stimulation (PS) with remote skin injury was used to assess LPM-mediated effects on remote skin wound healing. Dual Cre and Flippase fate-mapping tracked GATA6-expressing LPMs to evaluate their migratory behavior. Parabiosis experiments and administration of activated peritoneal fluid were conducted to identify the role of circulating factors. Proteomic and transcriptomic analyses were used to characterize LPM-secreted molecules. Fluorescently labelled fibronectin was tracked in plasma and skin wounds. Functional studies involved LPM depletion and myeloid-specific fibronectin deletion.

**Results:** Activation of LPMs trough PS significantly accelerated healing of remote skin wounds. Removing LPMs or using mice lacking LPMs abolished the beneficial effect. Adoptive transfer of LPMs but not B-cells after LPM depletion was sufficient to rescue the phenotype. Fate-mapping demonstrated that LPMs did not migrate to distant wounds after activation. Parabiosis and peritoneal fluid transfer experiments indicated the role of LPM-derived circulating signaling molecules in remote skin wound healing. Proteomic and transcriptomic analyses identified fibronectin as critical mediator, as adoptive transfer of $LyzM^{cre}$ $Fn^{flox}$ peritoneal cells failed to rescue the impaired remote wound healing phenotype in LPM deficient mice. Protein-coding fibronectin isoforms transcribed by LPMs, correspond to the soluble plasma and cellular fibronectin. Fluorescently labelled fibronectin was detected in the plasma and incorporated into skin wounds following adoptive transfer of $Fn^{gfp/gfp}$ peritoneal cells and PS.

**Conclusions:** LPMs act as a source of circulating fibronectin, facilitating extracellular matrix formation and promoting skin wound healing at remote sites. These findings reveal a novel endocrine role for LPMs in systemic tissue repair, and challenge the traditional perspective, that plasma fibronectin is exclusively liver-derived.

## SGVC5

### Machine learning models to predict hepatocellular carcinoma recurrence after liver transplantation

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**Background:** Cancer recurrence is the leading cause of death after liver transplantation (LT) for hepatocellular carcinoma (HCC). Although various models have been developed to predict recurrence, the application of machine learning and advanced mathematical modelling in this area is still limited.

**Methods:** We trained multiple machine learning classifiers using pre-transplant data from 514 HCC recipients in the Swiss Transplant Cohort Study. The best model was embedded in a Monte-Carlo-based mechanistic survival simulator to estimate the benefit of model-guided listing.

**Results:** Random Forest showed the best performance in predicting HCC recurrence (AUROC 0.70, 95% CI 0.55-0.82). Monte Carlo simulations showed that model-guided selection could reduce recurrence from 12.7% to 6.4%.

**Conclusions:** Our results demonstrate that combining predictive analytics with mechanistic modelling could enable data-driven, individualized HCC recurrence risk prediction and improve organ allocation.

**Conflict of Interest:** Anja Lachenmayer: CASCINATION, Johnson&Johnson, Boston Scientific, Histosonics, Roche, AstraZeneca.

 

## SGVC6

### *RNF43*-mutations are associated with the classical molecular subtype, vigorous antitumor immune responses and prolonged survival in pancreatic cancer

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**Background:** *RNF43*-mutations were correlated with microsatellite status (MS) in colorectal cancer, and, in our previous study, with fewer and later recurrences in pancreatic ductal adenocarcinoma (PDAC). Here, we undertake a detailed assessment of *RNF43*-mutations in PDAC.

**Methods:** 313 PDACs (308 MSS, 5 MSI) underwent NGS (TML-Assay). Spatial analyses classified PDACs according to their transcriptomic and proteomic immune signaling. Spatial compartments were defined by fluorescent imaging. 20 PDACs-*RNF43*$^{mut}$ *and -RNF43*$^{wt}$ were assessed by multiplex IF for immune features. 153 PDACs (22 *RNF43*$^{mut}$ and 131 *RNF43*$^{wt}$) underwent bulk RNA-seq. to assign into molecular subtypes.

**Results:** 24 *RNF43*$^{mut}$ were identified (22 MSS and 2 MSI). The incidence in MSS-PDAC (22/308, 7.1%) was consistent with the TCGA (6.7%). However, *RNF43*$^{mut}$ were more frequent among MSI-PDACs (2/5, 40%). *RNF43*$^{mut}$ had several mut. (incl. Wnt pathway genes), higher TMB-values (5.5 vs 1.67 Mut/mb, p <0.01) and significantly longer overall survival (47 vs 18 m, p <0.0001) than *RNF43*$^{wt}$. *RNF43*$^{mut}$ exhibit significantly higher densities of $CD8^+$T cells, dendritic cells and B cells (p <0.001 respectively) and an upregulation of ITGAX, CD11c, CD8 and HLA-DR compared with *RNF43*$^{wt}$. 20/22 patients with *RNF43*$^{mut}$ PDACs displayed the classical molecular subtype (90.9%).

**Conclusion:** *RNF43*$^{mut}$ PDACs show high TMB suggesting increased neoantigen load coupled with an abundance of antigen-presenting immune cells and an upregulation of immune determinants promoting antigen presentation. All this contributes to strong antitumor immune responses and improved outcomes.

## SGVC7

### Beyond P-Values: Novel Minimal Important Difference of the Comprehensive Complication Index (CCI®) that reflects a Clinically Meaningful Outcome in Major Abdominal Surgery

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**Background:** The Comprehensive Complication Index (CCI®) is a validated and sensitive measure of cumulative postoperative morbidity. However, statistically significant differences in CCI® scores may not always translate into clinically meaningful effects. The Minimal Important Difference (MID) helps define the threshold at which a between-group difference in outcome is perceived as relevant by patients. This study aimed to estimate the MID for the CCI® in patients undergoing major abdominal surgery.

**Methods:** An anchor-based approach was employed, using validated Patient-Reported Outcome Measures (PROMs) as anchors. Individual patient data were extracted from surgical studies that reported CCI® at 30 days as well as PROMs both at baseline and 30 days postoperatively. PROMs with a Spearman correlation coefficient of ≥|0.30| with the CCI® were considered suitable anchors. For each eligible anchor, linear regression was used to estimate the MID for the CCI®. A modified GRADE approach was then applied to assess the certainty of each estimate and guide a triangulation process to derive a single, final MID.

**Results:** We analyzed data from five randomized controlled trials (RCTs) and one prospective observational study involving patients undergoing major abdominal surgery (n = 2083). Nine PROMs showed a Spearman correlation coefficient of ≥|0.30| with the CCI® and were thus eligible as anchors. Separate linear regression models with each anchor yielded MID estimates for the CCI® ranging from 6.1 to 22.2 points. Triangulation of the MID estimates, considering their GRADE certainty level, resulted in a proposed single MID of 12 CCI® points.

**Conclusions:** We propose a 12-point between-group difference in the CCI® score as a clinically relevant effect in patients undergoing abdominal surgery. This MID provides an important foundation for sample size calculations and interpretation of RCTs and large real world observational studies.

## SGVC8

### Novel Benchmarks for Robotic Whipple Surgery

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**Background:** To ensure its continued safe adoption, objective reference values for robotic Whipple are needed. We aimed to define international benchmarks for robotic Whipple.

**Methods:** Consecutive patients undergoing robotic Whipple from 2020 to 2023 at expert centers were analyzed. Benchmark patients were those with benign or upfront resectable malignant disease with no arterial resection, neoadjuvant therapy, major co-morbidities, or prior major abdominal surgery.

**Results:** The benchmark cohort comprised 418 patients from 12 centers across four continents. Benchmarks were: conversion rate ≤4.3%, transfusion rate ≤2.1%, 6-month mortality ≤2.2%, major complications ≤23.2%, and CCI® ≤20.9. Clinically relevant pancreatic fistula (grade B/C) and hemorrhage (grade B/C) rates were ≤23.6% and ≤12.7%, respectively. For pancreatic ductal adenocarcinoma (n = 123), benchmarks were: R0 resection ≥98% and lymph node yield ≥20.

**Conclusion:** This is the first study to establish international benchmarks for robotic Whipple, demonstrating oncologic adequacy and morbidity comparable to open surgery, and clear benefits of minimally invasive surgery.

 

## SGVC9

### New score for Prediction of Hepatocellular Carcinoma Recurrence after Liver Transplantation offers better performance than RETREAT or RELAPSE

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**Background:** Hepatocellular carcinoma (HCC) recurrence is the leading cause of death after liver transplantation (LT). Accurate risk prediction is key for optimizing post-LT surveillance, but current models such as RETREAT and RELAPSE have limited predictive power.

**Methods:** A machine learning-based predictive model was developed using data from 497 HCC patients in the Swiss Transplant Cohort Study. Multiple classifiers were evaluated to identify the best-performing approach for recurrence prediction.

**Results:** Generalized Linear Models achieved a better performance (AUROC 0.77, 95% CI 0.64-0.89) compared with RETREAT and RELAPSE (AUROCs 0.74 and 0.75, respectively). The model incorporated pre- and post-LT variables, including pre-LT AFP, ALAT, ALBI score, post-LT tumor burden, vascular invasion, tumor grading and neutrophil-lymphocyte ratio.

**Conclusions:** Our newly developed machine learning-based score demonstrates superior predictive performance compared to RETREAT and RELAPSE in predicting HCC recurrence after LT. This tool might improve individualized post-transplant management and surveillance strategies.

# SGVC SURGERY ORAL PRESENTATIONS

## SGVC10

### Beyond MRI: using CEUS to increase the diagnostic accuracy of liver lesions in patients with pancreatic cancer

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**Background:** Accurate detection of liver metastases in patients with pancreatic cancer is crucial, as their presence may contraindicate surgery. Although magnetic resonance imaging (MRI) is the gold standard, it has limitations, especially in characterizing small hepatic lesions, which are also difficult to biopsy. Contrast-enhanced ultrasound (CEUS) offers superior temporal and spatial resolution and may be a valuable add-on when MRI is inconclusive. We evaluated the added clinical value of CEUS in accurately diagnosing unclear hepatic lesions ≤1 5 mm in these patients.

**Methods:** Prospective cohort study including all patients with pancreatic cancer and one or more unclear hepatic lesion ≤15 mm on MRI between July 2023 and March 2025. All patients underwent CEUS following MRI to further evaluate the lesions. Diagnosis was confirmed by biopsy or follow-up imaging.

**Results:** We included 19 patients with a median lesion size of 8 mm (range 6-15). CEUS diagnosed liver metastases in 16 patients and benign lesions in 3 patients. Notably, CEUS accurately identified two benign lesions misclassified as probably malignant on MRI and three malignant lesions misclassified as probably benign on MRI. However, CEUS misclassified two metastatic lesions as benign. CEUS achieved 89.5% accuracy in differentiating liver metastases from benign lesions in this cohort, with 87.5% sensitivity for detecting malignant lesions and 100% specificity for identifying benign lesions.

**Conclusion:** CEUS, when used alongside MRI, improves the diagnostic accuracy of small unclear hepatic lesions in this patient population, and supports clinical decision-making. This underscores the importance of a comprehensive, intermodal imaging strategy tailored to individual patient characteristics for optimal diagnosis and management.

## SGVC11

### Global Benchmarks for Minimally Invasive Right Hemicolectomy for Adenocarcinoma

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**Background:** Oncologic right hemicolectomy (RHC) is the standard treatment for right-sided colon cancer. Despite increasing complexity, this procedure remains non-centralized in most countries, underscoring the need for assessment of surgical quality. Benchmarking –a validated quality improvement tool– defines best-achievable results (i.e., benchmarks), enabling centres to compare their performance and detect hidden quality gaps. This study aimed to determine the benchmarks for minimally invasive RHC.

**Methods:** We analysed data from consecutive patients with adenocarcinoma of the colon who underwent minimally invasive RHC between July 2017 and June 2022 at 19 expert centres across five continents. Ideal cases were defined as elective surgeries for cT1-T3 tumours without distant metastases, major comorbidities, or significant prior abdominal surgeries. Benchmarks were derived for 19 outcome parameters. Cut-offs were set at the 75$^{th}$ percentile for negative outcomes and the 25$^{th}$ percentile for positive outcomes across all centres' medians.

**Results:** Among 3 154 patients, 686 (22%) qualified as ideal. The proportion of ideal patients varied widely across centres (range: 2– 51%). Benchmarks at 3 months were occurrence of any complication ≤38%, major complications ≤8%, and 0% mortality. Procedure-specific benchmarks were anastomotic leak ≤3%, and deep surgical site infections ≤6%. Oncologic benchmarks included R0 resection rates of 100% and ≥12 lymph nodes harvested in ≥97%.

**Conclusion:** This study presents the first internationally valid benchmarks for RHC. By comparing to this reference, centres and surgeons can detect formerly hidden quality gaps and improve their performance and patient outcome.

 

## SGVC12

### Evidence Map of Colonic Diverticulitis – A Living Systematic Review with Meta-Analyses

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**Background:** Colonic diverticulitis is one of the most common diseases of the gastrointestinal tract. Many different approaches with regard to management have been developed and are being studied. As a result, a large and complex field for research has evolved. The aim of this project was to create a comprehensive overview of available high-quality literature and evidence gaps.

**Methods:** A literature search was done in CENTRAL, Medline, Web of Science, and EMBASE. All RCTs and SRs dealing with the treatment of colonic diverticulitis were included. From RCTs, data on morbidity and other relevant outcomes was extracted. Whenever possible, outcomes were meta-analysed. Furthermore, trial quality was assessed using the Cochrane risk of bias 2.0 tool and the GRADE approach was applied.

**Results:** Out of over 3800 articles, 61 RCTs with 10574 patients and more than 90 SRs were included and mapped in 35 research topics. For 6 of the 35 research topics a living meta-analysis was performed. For the remaining research topics, evidence remains sparse.

**Conclusions:** The Evidence Map of Colonic Diverticulitis is the 'go-to' resource for a perpetually current overview of the evidence on the treatment of colonic diverticulitis. The Evidence Map is freely accessible via the internet (www.EVIglance.com) and available as a mobile phone app.

## SGVC13

### Vacuum-assisted self-expanding stents – early experiences with a novel tool to prevent and treat colorectal anastomotic leakages

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**Background:** Anastomotic leakage (AL) remains a dreaded complication following colorectal resections. The routine use of diverting loop ileostomies (DLI), is associated with significant morbidity, triggering interest in alternative strategies. The VAC-Stent Colon (VSC), a novel endoscopic treatment, combines vacuum-assisted closure with a self-expanding stent, providing luminal patency. Here we report our 1-year experience with the VSC.

**Methods:** Retrospective analysis of patients treated with VSC at our department from 02/2024 to 03/2025 either therapeutically for AL or prophylactically in high-risk anastomoses. Outcomes, including AL healing, complications, and need for DLI, were assessed with follow-up until complete healing (CH) of AL or DLI closure.

**Results:** Thirteen patients received a total of 47 VSC. Of these, 10 patients were treated with therapeutic intent (43 VSC). Five patients achieved CH under VSC therapy (4/5 with DLI closure, 1/5 managed without DLI). One patient had CH but has postponed DLI closure. Four patients have completed VSC treatment with local resolution of AL, currently awaiting interval endoscopy to confirm CH. Additionally, three patients underwent prophylactic VSC therapy following high-risk anastomoses without a DLI. Notably, no AL occurred in this group. The most commonly observed complication was pain, particularly in distally placed VSC, followed by VSC migration. Outpatient therapy was successfully implemented, demonstrating feasibility in select cases.

**Conclusion:** VSC shows promising results as therapeutic tool for treating colorectal AL and as prophylactic measure in high-risk anastomoses. It offers the benefits of vacuum therapy combined with mechanical stenting providing luminal patency, potentially reducing the need for DLI.

## SGVC14

### Preoperative Vascular Mapping for Complete Mesocolic Excision During Right Colectomy; a Single Center Feasibility Study

Evangelos Kalogiannis[1], Lucien Widmer[2], Mélanie Kauper[3], Nelly Gauderon[3], Julian Vidal[2], François Pugin[3], Alexis Litchinko[3], Bernhard Egger[3], Michel Adamina[1,3]

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**Background:** Colorectal cancer (CRC) affects 4.5% of the general population, with 15% concerning the right colon. Surgery, when feasible, varies from conventional right colectomy to Complete Mesocolic Excision (CME). Despite the probable oncological outcomes reported in the literature after CME, there is an acknowledged higher risk of operative vascular lesions. Various approaches have been proposed to facilitate CME, such as the "open book" model and 3D modelling of the mesenteric vessels, however CME remains technically challenging. Our study aims to analyze whether preoperative CT imaging with vascular mapping (PVM) of the superior mesenteric vessels could offer guidance on the vascular anatomy during CME.

**Methods:** This prospective, monocentric study aims to include 30 patients undergoing CME for right CRC. Preoperatively, a biphasic CT scan with 3-D vascular reconstruction of the superior mesenteric vessels is performed. Vascular distances are calculated based on CT, then compared to intraoperative documentation of the mesenteric vessels (Figure 1). Primary outcomes are the surgeons' evaluation of the PVM and the statistical correlation of the vascular distances between preoperative CT and perioperative findings.

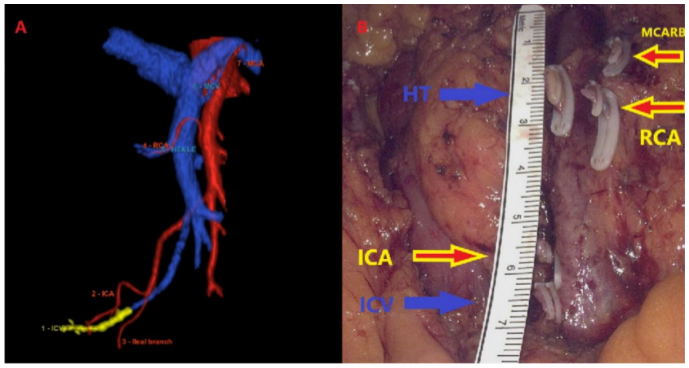


**Figure 1:** A. Preoperative Vascular Mapping with visualization of the superior mesenteric vein (blue) and the superior mesenteric artery (red) and their branches. Ileocecal artery is highlighted with yellow. B. Intraoperative documentation with identification of the superior mesenteric vessels (ICV: Ileocecal vein, ICA: Ileocecal artery, RCA: Right colic artery, HT: Henle Trunk, MCARB: Media colica artery; right branch).

**Results:** To this day, 22 patients have been included. Surgeons found the preoperative vascular mapping very useful (3.58/5 on a Likert scale). Mean operation time was 263 minutes, with a

mean of 36 lymph nodes harvested and no vascular lesions. Postoperative ileus occurred in 27% (6/22), Clavien-Dindo complications III-V in 13,6% (3/22) with one anastomotic leak (4,5%) and one death after discharge at home of unknown cause. Statistical analysis of the vascular distances will be performed upon completion of the study.

**Conclusions:** Our preliminary data suggest that PVM may be a valuable tool for vascular guidance in this complex surgical technique. Further studies are required to asses PVM utility in CME and confirm these outcomes.

## SGVC15

### Meta-Analysis of Corticosteroids in Pancreatic Surgery

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**Background:** The peri-operative use of corticosteroids can influence systemic response after pancreatic surgery and may be beneficial in reducing complications. The aim of this systematic review was to evaluate the influence of corticosteroids in pancreatic surgery.

**Methods:** A literature search was done in CENTRAL, Medline, and Web of Science. All RCTs in patients undergoing pancreatic surgery with perioperative corticosteroid treatment were included. Outcomes were analysed as odds ratios (OR) or mean differences (MD) in a random-effects model. Risk of bias (Cochrane 2.0) and certainty of evidence (GRADE) were assessed.

**Results:** Four RCTs were included. There was no difference regarding mortality (OR 0.65, 95%-CI: 0.17 to 2.46, p = 0.52). However, complications were lower in the corticosteroids group (OR 0.53, 95%-CI: 0.3 to 0.91, p = 0.02). Specifically, there were fewer fluid collections in the corticosteroids group (OR 0.47, 95%-CI: 0.25 to 0.89, p = 0.2). POPF, DGE and PPH did not differ between the groups. Furthermore, patients treated with corticosteroids had a shorter length of hospital stay (MD -3.9 days, 95%-CI: -5.2 to - 2.5, p = 0.01).

**Conclusions:** There is moderate certainty of evidence that perioperative use of corticosteroids in pancreatic surgery reduces complications, particularly fluid collections, and is associated with a shorter length of hospital stay.

## SGVC16

### Impact of fluorescence angiography on anastomotic leak and complication rates after colorectal surgery: a systematic review and meta-analysis of randomized controlled trials

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**Background:** Anastomotic leak (AL) is the principal concern after colorectal surgery with anastomosis and occurs in 8.6% of ileo-colic resections and up to 17.1% of low anterior resections. Fluorescence angiography (FA) has gained acceptance over the last years as a mean to assess anastomosis vascularization, a key element implicated in AL. Our aim was to perform a systematic review and meta-analysis of randomized controlled trial on this topic, focusing on AL and morbidity.

**Methods:** A systematic review was performed according to PRISMA statement, until 16.03.2025, using MEDLINE, EMBSAE and CENTRAL for research. Randomized controlled trial in English, comparing FA with standard care were eligibles. Articles were screened, bias detected and data extracted and analyzed.

**Results:** Eight studies were retained, gathering 3999 patients. FA was significantly protective against AL with an Odds ratio of 0.64 (95%CI: 0.39 to 0.98, $I^2$: 0%, p <0.0001) and reduction of risk of 4 percentage points (95%CI: -0.05 to 0,02 $I^2$: 0%, p <0.0001). However, FA did not reduce postoperative morbidity compared to control group.

**Conclusions:** High quality evidence shows that the utilization of FA in colorectal surgery reduces the rate of AL.

## SGVC17

### First experiences with the daVinci SP system in abdominal surgery in Switzerland

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**Background:** The da Vinci single-port robotic system (SP) is already established for urological and transoral robotic procedures. Although several abdominal surgeries have been performed worldwide, suitable indications and standardized procedural techniques are not yet defined. Our aim is to share first experiences and challenges of implementing a new robotic system for abdominal surgery and determining the appropriate indications.

**Methods:** All abdominal surgeries performed with the da Vinci SP system since December 2024 in our institution were reviewed. Preparation and docking time, surgical steps, operative time, adverse events and short-term follow up were documented.

**Results:** 19 operations such as hernia repairs (inguinal, ventral and hiatal), cholecystectomies and gastric wedge resections have been performed. There were no conversions or intraoperative complications; an assistant trocar was required for two procedures. Except for one self-limiting seroma and prolonged pain no adverse events were seen. During the incisional hernia repair, we clearly experienced the limitations of the SP system due to the restricted range of motion and lack of space.

**Conclusions:** Visceral surgery with the da Vinci SP system is feasible with good cosmetic and short-term functional results. Due to the limited range of movement and the distance to be maintained from the target region, the SP system has narrower indications compared to the multi-port system. Future plans include expanding its use to benign and oncologic upper and lower GI surgeries.

## SGVC18

### Immunonutrition in Minimally Invasive Major Abdominal Surgery

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**Background:** Immunonutrition (IN) is recommended in major abdominal surgery. Evidence is sparse on its effect in minimally-invasive procedures. The aim of this study was to assess its effect on postoperative outcomes in minimally invasive major abdominal surgery.

**Methods:** A literature search was done in CENTRAL, Medline, and Web of Science. All RCTs in patients undergoing minimally invasive major abdominal surgery were included. Outcomes were analysed as odds ratios (OR) or mean differences (MD) in a random-effects model. Risk of bias (Cochrane 2.0) and certainty of evidence (GRADE) were assessed.

**Results:** Eleven RCTs with 812 patients were included. Mortality did not differ between IN and standard nutrition (OR 1.01, 95%-

 

CI: 0.2 to 5.08, p = 0.99). IN had no effect on overall (OR 1.22, 95%-CI: 0.65 to 2.4, p = 0.5) or infectious complications (OR 0.75, 95%-CI: 0.44 to 1.28, p = 0.3). Length of hospital stay was similar between the groups (MD 0.03 days, 95%-CI: -0.39 to 0.45, p = 0.93). There was only one RCT with low risk of bias.

**Conclusions:** The beneficial effects of immunonutrition observed in open surgery do not appear to translate to minimally invasive major abdominal surgery. Routine use in this setting is not supported by current evidence.

## POSTER: GASTROENTEROLOGY

### G1

#### Sustained Corticosteroid-Sparing Effects of Upadacitinib Maintenance Therapy in Patients With Moderate-to-Severe Crohn's Disease: 2-Year Results From the U-ENDURE Long-Term Extension Study

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**Background:** Long-term use of corticosteroids (CS) is a concern, as prolonged use is associated with increased mortality and adverse outcomes. Here, we evaluated the long-term efficacy of Upadacitinib (UPA) in achieving CS-free clinical and endoscopic outcomes.

**Methods:** Patients who completed the U-ENDURE 52-week (wk) maintenance study were eligible for the subsequent long-term extension (LTE) study wherein they continued their previously assigned treatment. Efficacy was assessed from LTE wk 0-wk48.

**Results:** Among patients with 2 years of total maintenance therapy, 35.7% (87/244) received CS at baseline. CS-free clinical remission was achieved at LTE wk 0 and wk 48 per SF/APS (overall population: UPA15, 71.7%, 58.9%; UPA30, 81.8%, 57.7%; patients with baseline CS use: UPA15, 71.8%, 53.8%; UPA30, 79.2%, 54.2%, NRI). At LTE wk 48, a high fraction of UPA-treated patients achieved CS-free endoscopic remission (overall population: UPA15, 33.6%; UPA30, 46.0%; patients with baseline CS use: UPA15, 28.2%; UPA30, 54.2%, NRI).

**Conclusion**: Patients with moderate-to-severe Crohn's Disease who received long-term UPA maintenance treatment sustained high rates of CS-free clinical and endoscopic outcomes.

### G2

#### Swiss cantonal hospital experience in endoscopic submucosal dissection for colorectal lesions

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*Bürgerspital Solothurn*

**Background:** Endoscopic submucosal dissection (ESD) has become an established technique for en-bloc resection of large or complex colorectal lesions. However, conventional ESD (C-ESD) can be technically difficult and time-consuming. For non-malignant lesions, ESD with snaring (hybrid ESD; H-ESD) can facilitate lesion removal and to save time. We report the outcomes of ESD (C-ESD and H-ESD) in a regional hospital setting in Switzerland.

**Methods:** We retrospectively evaluated the outcomes of all ESD procedures performed between 2018 and 2024 in our hospital. Primary outcome was the recurrence rate at the first follow-up endoscopy (4.2 ± 2.4 months after resection). Secondary outcomes included complete en-bloc resections, R0 resections, procedural time and complication rates.

**Results:** Ninety patients (42 women; mean age 67 ± 12 years) were included in the study of which 51 underwent C-ESD and 39 H-ESD. The recurrence rate at first follow-up endoscopy was 8.8% (6/68) with no difference (p>0.05) between C-ESD (8.1%; 3/37) and H-ESD (9.7%; 3/31). The overall en-bloc resection rate was 63%, significantly higher (p <0.001) in the C-ESD group (98%) vs H-ESD (18%). Similarly, R0 resection rates were significantly (p <0.001) higher in C-ESD (86%) vs H-ESD (18%) groups. Procedural times were similar in the C-ESD (86 ± 44 min) and H-ESD (88 ± 45 min) groups. Severe adverse events requiring surgical intervention occurred in two cases (2.2%) one in the C-ESD and one in the H-ESD group.

**Conclusions:** Colorectal ESD is a feasible and effective technique in non-tertiary hospitals, achieving outcomes comparable to those reported in specialized centers. Although conventional ESD achieves higher en-bloc and R0-resections hybrid ESD is a pragmatic, equally good alternative in non-malignant large polyps.

### G3

#### Effective Management of Esophageal Variceal Hemorrhage Complicated by Ulcerative Reflux Esophagitis Using Over-the-Scope Clip (OTSC) Following Failed Band Ligation: A Case Report

Thomas Balanis, Brindusa Diaconu, Radu Tutuian, Felix Brunner

*Bürgerspital Solothurn*

Esophageal variceal bleeding is a severe complication of portal hypertension, often requiring immediate endoscopic intervention. We present the case of a 74-year-old male with a history of liver cirrhosis, esophageal varices, who presented with a hemodynamically relevant hemorrhage from a varix at the esophagogastric junction and a severe reflux esophagitis. Initial endoscopic band ligation (EBL) within the ulcerative reflux esophagitis, failed due to disruption of the macerated tissue leading to active variceal bleeding. Salvage therapy with an over-the-scope clip (OTSC) was performed with successful hemostasis. The patient remained stable without recurrent bleeding. This case underscores the utility of OTSC in cases where conventional band ligation of varices at the esophagogastric junction with concomitant reflux esophagitis fail.

 

## G4

### Single-Session Endoscopic Ultrasound-Directed Transgastric ERCP: A Case Report

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**Background:** Endoscopic ultrasound-directed transgastric ERCP (EDGE) using lumen-apposing metal stents (LAMS) is a safe and effective procedure for managing pancreaticobiliary diseases in patients with Roux-en-Y gastric bypass (RYGB). However, in urgent cases such as cholangitis, the recommended delay of 1–2 weeks before ERCP to minimize the risk of LAMS migration may be impractical, leading to increased procedural burden and patient risk.

**Case Report:** A 58-year-old woman presented with upper abdominal pain. MRCP revealed symptomatic choledocholithiasis in the setting of a prior cholecystectomy and RYGB. Due to the severity of symptoms and a scheduled neurosurgical procedure in the immediate future, we opted against delaying biliary drainage.

**Procedure:** The procedure was performed under propofol sedation with prophylactic broad-spectrum antibiotics. First, an EUS-guided gastro-gastric anastomosis was created by deploying a 20 mm electrocautery-enhanced LAMS (Hot-Axios; Boston Scientific) using pure-cutting current. The proximal flange was then fixed to the gastric wall using a dedicated over-the-scope clip device (Stentfix OTSC; Ovesco). The stent was dilated to 15–18 mm (CRE balloon; Boston Scientific), allowing insertion of a duodenoscope through the LAMS into the excluded stomach. The duodenoscope was advanced under fluoroscopic guidance to the ampulla, and a successful ERCP was performed.

**Conclusion**: Single-session EDGE is feasible when utilizing advanced endoscopic tools. In selected symptomatic patients requiring urgent biliary drainage, this approach may reduce procedural delays and should be considered as a valuable alternative to staged interventions.

Prashant Kedia, Endosc Int Open 2023 / Michiel Bronswijk, Digestive Endoscopy 2025

## G5

### Use of Resuscitative Endovascular Balloon Occlusion (REBOA) to Facilitate Hemostasis in a Massive Gastrointestinal Hemorrhage – A Case Report

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**Background:** REBOA is increasingly used in the management of non-compressible hemorrhages. We report a case in which REBOA was employed to facilitate localization and endoscopic control of a massive gastrointestinal (GI) bleed.

**Case report:** A 65-year-old man was found unconscious due to massive hematochezia. Emergency medical services noted a cardiac arrest. Following 10 minutes of cardiopulmonary resuscitation, return of spontaneous circulation was achieved. On arrival to the emergency department, the patient was hemodynamically unstable with ongoing hematochezia, a hemoglobin of 35 g/L and severe lactic acidosis (pH 7.15, lactate 11.4 mmol/L). Despite initiation of a massive transfusion protocol, the patient remained unstable. Urgent upper endoscopy revealed large amounts of blood in the stomach and duodenum, but visualization was insufficient to localize the bleeding source. A REBOA catheter was inserted through a 7Fr sheath into the right femoral artery, and proximal aortic occlusion (zone 1, above the diaphragm) was performed. Improved endoscopic visibility allowed identification of a duodenal ulcer with a visible vessel, successfully treated using an over- the-scope clip. After balloon deflation, no further bleeding was observed. Prophylactic embolization of the gastroduodenal artery was performed by interventional radiology. The patient remained hemodynamically stable without further GI bleeding but succumbed three days later due to respiratory failure and underlying comorbidities.

**Conclusions:** In selected cases of massive gastrointestinal hemorrhage, the use of REBOA can be a valuable adjunct to stabilize patients and enable endoscopic hemostasis when visibility is limited.

## G6

### Update 2025 on the Swiss Eosinophilic Esophagitis Cohort

Jeanine Wakim[1], Catherine Saner[1], Ekaterina Safroneeva[2], Jean-Benoit Rossel[2], Emanuel Burri[3], Patrick Aepli[4], Annett Franke[5], Luc Biedermann[6], Thomas Greuter[1,7], Peter Netzer[8], Alex Straumann[6], SEECS group, Alain Schoepfer[1]

*1 CHUV, Lausanne, 2 ISPM Bern, 3 US Baselland, 4 KS Luzern, 5 KS St. Gallen, 6 US Zuerich, 7 Spital Wetzikon, 8 GastroZentrum Bern*

**Background and aims:** The Swiss EoE Cohort Study (SEECS, starting in 2016) collects longitudinal data on adult patients with eosinophilic esophagitis (EoE) to better characterize natural history, long-term treatment outcomes and clinical uptake/impact of emerging treatment options, safety aspects, EoE-specific quality of life, and socio-economic impact.

**Patients and Methods:** Patients are included using validated online instruments (via redcap) for capture of symptoms, EoE-specific quality of life, endoscopic and histologic activity. A follow-up visit is performed once a year. A biobank (located at CHUV) stores biopsies and blood samples. In addition to patients with EoE, samples of patients with gastro-esophageal reflux disease (GERD) and esophagus-healthy controls are collected. SEECS is supported by the Swiss National Science Foundation. Approval from the major Swiss IRB's has been granted.

**Results:** As of May 2025, 825 patients with EoE, 29 with GERD, and 33 esophagus-healthy controls have been included. Recruitment performance is on track with anticipated 70 EoE patients per year. Biosamples have been provided to collaborators for evaluation of novel diagnostic and therapeutic approaches. As of May 2025, seventeen papers were published with SEECS data and several projects are ongoing.

**Conclusions:** Over the last years, SEECS evolved into one of the largest prospective long-term cohort studies in the world for adult EoE patients. Besides fostering research collaborations in the field of translational and clinical science, it is an excellent tool to monitor efficacy and safety aspects of novel therapeutics after market approval.

 

## G7

### Dupilumab Results in Clinically Meaningful Improvements in Quality of Life and a Range of Symptoms in Patients With Eosinophilic Esophagitis: Post-hoc Analysis of LIBERTY EoE TREET

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**Background:** Dupilumab improved histologic, symptomatic, and endoscopic aspects in patients (pts) with Eosinophilic esophagitis (EoE).

**Methods:** Pts aged ≥12 years receiving dupilumab 300 mg once weekly or placebo in the LIBERTY EoE TREET study were evaluated. Pt-reported outcome measures assessed dysphagia, other EoE symptoms, and quality-of-life (QoL). Clinically meaningful improvement thresholds were generated using the Patient Global Impression of Severity and proportions of pts achieving these thresholds were compared at Week 24.

**Results:** 240 pts (placebo n = 118; dupilumab n = 122) were included. At Week 24, a significantly greater proportion of dupilumab-treated pts achieved ≥13-point reduction in Dysphagia Symptom Questionnaire score vs placebo (72.1% vs 44.1%; $P$ <0.0001), EoE-Symptom Questionnaire Frequency score (≥3.7-point reduction; 50.0% vs 30.5%; $P$ = 0.002) and EoE-Impact Questionnaire score (≥0.6-point reduction; 64.8% vs 41.5%; $P$ = 0.0001).

**Conclusions:** Dupilumab showed significant improvement in dysphagia symptoms, other EoE symptoms, and QoL.

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## G8

### Dupilumab Normalizes Key Histopathologic Features of Eosinophilic Esophagitis: Post Hoc Analysis of the Phase 3 LIBERTY EoE TREET Study

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**Background:** Phase 3 LIBERTY EoE TREET (NCT03633617) study assessed resolution of the eight EoE Histologic Scoring System (EoEHSS) histopathologic features of EoE in adults/adolescents treated with dupilumab vs placebo.

**Methods:** Patients aged ≥12 years with EoE received dupilumab 300 mg weekly (qw) or placebo for 24 weeks (Part B), followed by all patients receiving dupilumab through Week 52 (Part C). EoEHSS component scores were evaluated at baseline, Week 24, and Week 52.

**Results:** Dupilumab significantly improved resolution rates vs placebo in both grade/stage for most EoEHSS components: eosinophil abscesses (97% vs 49%/97% vs 49%), eosinophil surface layering (96% vs 30%/96% vs 30%), surface epithelial alteration (87% vs 50%/87% vs 50%), basal zone hyperplasia (78% vs 11%/78% vs 11%), lamina propria fibrosis (90% vs 35%/90% vs 35%), esophageal inflammation (15% vs 0/88% vs vs 8%), and dyskeratotic epithelial cells (93% vs 74%/(93% vs 74%). Improvements were maintained or enhanced at Week 52.

**Conclusions:** Dupilumab normalized most EoEHSS histopathological features after 24 weeks, with greatest improvements in epithelial-related features and fibrosis.

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## G9

### Impact of Reprocessing Steps on Microbial Load of Colonoscopes

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**Background:** Reprocessing of endoscopes is challenging. The aim was to demonstrate the effect of the various reprocessing steps on the microbiological load of endoscopes.

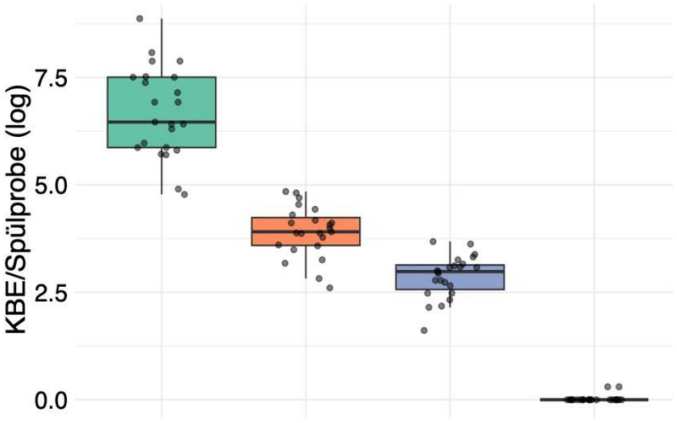
**Methods:** For sample collection, the working channels of colonoscopes (L = 1330 mm & 1680 mm) were flushed with 20 ml

NaCl (0.9%) via biopsy port. Flushing was performed at four stages of reprocessing: after clinical use, after pre-cleaning, after cleaning and after high-level disinfection in a PAA-based washer-disinfector. The microbial count was quantified by membrane filtration and cultivation on agar plates (cfu/channel).

**Results:** Log-Value of cfu/channel of n = 23 reprocesses showed a mean of 6.68 after usage; 3.91 after pre-cleaning; 2.86 after manual cleaning and 0-1 after disinfection, Fig 1.

**Conclusions:** Standard reprocessing reduces the microbial load to virtually zero although microbial load after usage is high and variant. Assuming that 10% of reprocessed colonoscopes might yield an insufficient value of >25 cfu/channel (e.g. annual SGG hygienic test), a number needed to test can be estimated of n = 220 to demonstrate a lower or even zero event rate.




**G10**

## Dupilumab Led to Rapid and Sustained Improvement in Dysphagia in Patients With Eosinophilic Esophagitis After Switching From Placebo: Results From Part C Of The Liberty EoE TREET Study

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**Background:** This study assessed the effect of dupilumab on symptoms of dysphagia in patients (pts) with EoE who switched from placebo to dupilumab at 24 weeks (Wks).

**Methodology:** Pts who completed Parts A and B (received dupilumab/placebo weekly) entered Part C–a 28-Wk extended treatment period in which all pts received dupilumab weekly. Percent change in Dysphagia Symptom Questionnaire (DSQ) score and number of days with dysphagia from Wk24 through Wk52 vs the Wk24 baseline were assessed.

**Results:** In Parts A (n = 37) and B (n = 37), after 24Wks of placebo, mean (SD) DSQ score was 24.7 (19.6) and 21.5 (18.4); days with dysphagia was 6.6 (4.7) and 6.0 (4.7), respectively. Significant improvements in DSQ score were observed in ≤4Wks of the switch to dupilumab (mean% reduction:31.5% and 29.9%). At Wk52, mean% reductions were 63.6% and 59.7% in DSQ score, and 63.2% and 46.8% in the number of days with dysphagia.

**Conclusion:** Dupilumab 300 mg weekly resulted in rapid and sustained improvement in symptoms of dysphagia.

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**G11**

## Upadacitinib improves symptomatic, biochemical, and sonographic parameters in active UC patients up to one year after treatment induction – one year interim results from the IBD-DACH study EUROPE

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**Background:** While the efficacy of Upadacitinib (UPA) has been demonstrated in clinical trials in ulcerative colitis (UC), real-world evidence on the effectiveness and safety of UPA in UC remains scarce.

**Methods:** EUROPE is an ongoing, prospective, observational, multi-country study in patients with active UC who initiate therapy with UPA. Here, we report symptomatic remission and sonographic response data of 82 patients with a documented visit at week 52 and ongoing UPA treatment.

**Results:** In this population, symptomatic remission at weeks 8 and 52 was achieved by 75.6% and 79.3% of patients, respectively. The rate of patients with a bowel wall thickness >3mm of the most affected segment decreased significantly from 90.4% at baseline to 30.8% at week 8 and 21.2% at week 52 (as

 

observed). Of 263 patients enrolled until August 2024, 139 adverse events were reported of which most were non-serious.

**Conclusion**: In this one-year interim analysis of the EUROPE study, UPA treatment in UC was associated with a positive benefit/risk profile.

**G12**

## Effectiveness and Safety of Mirikizumab after switching from Ustekinumab in Patients with Moderate-to-Severe Crohn's Disease: Results from a Long-Term Extension Study

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**Background:** We report one-year efficacy and safety of mirikizumab (Miri), an interleukin-23p19 inhibitor, in patients with moderately-to-severely active Crohn's disease (CD) treated with ustekinumab (Ust) in VIVID-1 who enrolled in the open-label extension study VIVID-2 (NCT04232553).

**Methods:** Patients who completed VIVID-1, on Ust 6mg/kg intravenous (IV) at week (W) 0, then 90mg subcutaneous (SC) every 8 weeks, and enrolled in VIVID-2, received Miri. Dose assignment in VIVID-2 was dependent on achievement of endoscopic response (≥50% reduction from baseline in Simple Endoscopic Score for Crohn's Disease [SES-CD]) at W52 of VIVID-1.

**Results:** Among the 92 endoscopic non-responders to Ust who received Miri IV-SC in VIVID-2, 41.4%(modified non-responder imputation [mNRI])/46.2%(observed case [OC]) achieved endoscopic response, 22.0%/24.4% achieved endoscopic remission and 75.0%/84.8% achieved Crohn's Disease Activity Index (CDAI) remission 52 weeks later. Among the 122 endoscopic responders to Ust, efficacy was maintained across clinical and endoscopic endpoints following switch to Miri SC. Of the Ust endoscopic responders who were not in remission, after switching to Miri SC, 57.2%/60.0% and 26.5%/28.3% gained CDAI and endoscopic remission respectively, 52 weeks later. Treatment-emergent adverse events (AE) were reported in 64.7% and 62.5% of Miri IV-SC and Miri SC patients, respectively. Serious AEs were reported in 6.9% and 7.0%, and discontinuations due to AE were reported in 1% and 2.3% of patients.

**Conclusion:** The results from VIVID-2 showed clinical and endoscopic efficacy of Miri up to 1 year in patients with moderately-to-severely active CD previously exposed to Ust. Over 40% of Ust endoscopic non-responders in VIVID-1 achieved endoscopic response at W52 of Miri treatment. Safety data were consistent with the known Miri safety profile.

**G13**

## Rapunzel Syndrome – a rare cause of recurrent vomiting and weight loss

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**Background:** Rapunzel Syndrome is an exceptionally rare condition characterized by a trichobezoar, whose hair tail extends into the small intestine, which led to the name of the fairytale character. Here, we report a case of an extensive trichobezoar successfully managed via endoscopic removal.

**Case Description:** A 15-year-old girl was admitted to a local hospital due to daily vomiting and weight loss. Gastroscopy revealed severe reflux esophagitis and a large, non-passable foreign body in the stomach resembling steel wool. Due to risk of aspiration, the procedure was interrupted. A subsequent CT scan showed a distended stomach filled with a foreign body extending through the dilated duodenum and beyond the pars horizontalis. After referral to a tertiary hospital, the trichobezoar was endoscopically fragmented and completely removed after six hours under protective intubation. A follow-up endoscopy three months later showed complete healing of the extensive gastric and duodenal ulcers and no signs of recurrence of trichophagia, which had been triggered by longstanding bullying.

**Conclusion:** A trichobezoar is a compact mass of ingested hair in the gastrointestinal tract, primarily affecting adolescent females over the age of 10 years. The formation of a trichobezoar requires a patient to repeatedly pull out and ingest significant amounts of hair over an extended period of time, a behavior known as trichotillomania and trichophagia, respectively. Only about 1% of patients with trichophagia develop trichobezoars. After radiologic or endoscopic diagnosis, a removal of the trichobezoar is indicated. Although surgical removal is mainly favored / described in the literature, this case demonstrates that a carefully performed endoscopy with gradual fragmentation and removal is a safe, effective and minimally invasive treatment option even for a large trichobezoar with extension into the small intestine. An overtube device may be used to reduce the risk of esophageal injury.

**G14**

## Impact of Mirikizumab on Extraintestinal Manifestations of Crohn's Disease in the VIVID-1 Study

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**Aim:** Here we assess the impact of mirikizumab (miri), an anti-IL-23p19 monoclonal antibody, on extra-intestinal manifestations (EIMs) in patients with Crohn's disease (CD).

**Methods:** Patients randomized to miri (N = 579) or placebo (N = 199) in the VIVID-1 study were included. Categorical endpoints were analysed using the Cochran–Mantel–Haenszel test.

**Results:** Of 778 patients in the miri and placebo arms of VIVID-1, 173 (22.2%) had ≥1 EIM at baseline, primarily arthritis or arthralgia. At W12, a numerically higher percentage of mirikizumab-treated vs placebo-treated patients had EIM resolution (46.2% vs 31.7%; $P$ = 0.113), which increased to 56.8% for miri

 

and decreased to 14.6% for placebo at W52 ($P$ <0.0001). The percentage of patients who achieved both clinical response by Patient-Reported Outcome at W12 and EIM resolution at W52 was significantly higher for miri vs placebo (43.2% vs 14.6%; $P$ <0.0001). Among patients with EIMs at baseline, higher percentages of miri-treated than placebo-treated patients achieved (1) clinical response at W12 and clinical remission at W52 (39.4% vs 19.5%; $P$ <0.024) and (2) clinical response at W12 and endoscopic response at W52 (36.4% vs 4.9%; $P$ = 0.0002). The rate of new-onset EIMs at W52 was low (1.8%-1.9%) in both miri and placebo groups.

**Conclusion:** Mirikizumab treatment led to a numerically higher rate of EIM resolution at W12 and W52 vs placebo. Patients with EIMs at baseline achieved similar clinical and endoscopic outcomes to the overall VIVID-1 population.

## G15

### Infliximab in a case of refractory non-Crohn's disease complex fistula system – pure desperation or successful ultima ratio?

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**Background:** Infliximab (IFX) has been a first-line treatment for perianal fistulizing Crohn's disease (CD) since 1999, as endorsed by the European Crohn and Colitis Organization (ECCO) and the American Gastroenterological Association (AGA). However, its role in non-CD-related fistulas remains largely unknown, despite the established involvement of tumor necrosis factor-alpha (TNF-α) in both types of fistulas.

**Methods:** A 76-year-old male with a history of prostate cancer treated with radiation (2017) and multiple surgeries for complications following rectal injury during prostatectomy—with subsequent abscess formation—presented in 2024 with recurrent fistulas and a presacral wound cavity with sepsis. The clinical picture ruled out isolated perianal CD, for which IFX is commonly used. Due to limited surgical options and failed endoscopic treatments after initial improvement, the patient was considered for IFX therapy.

**Results:** The patient initiated IFX induction therapy (5 mg/kg every two weeks for the first two doses) in May 2024, followed by maintenance therapy (5 mg/kg every four weeks). Within months, he reported significant clinical improvement. At the one-year follow-up, no further hospitalizations were required, and the presacral wound cavity reduced on MRI from 37x43x62 mm (March 2024) to 23x22x45 mm (May 2025). The last IFX trough level was 8.2 µg/mL. Despite a history of recurrent urinary tract infections (UTIs) associated with mono-J catheters, the frequency of UTIs did not increase during therapy with IFX.

**Conclusions:** Infliximab may represent an effective therapeutic option for non-CD-related fistulas, particularly in cases where other treatment modalities have failed.

## G16

### Does pickled food consumption increase the risk of oesophageal cancer – a systematic review with a meta-analysis, adjusted for a single reviewer

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**Background:** Pickled foods, common in Asian diets, have gained popularity in plant-based nutrition globally. Some studies suggest compounds formed during food processing may increase oesophageal cancer risk. This meta-analysis examines the association between pickled vegetable consumption and oesophageal cancer risk.

**Methods:** A PubMed search identified English-language studies published by 31 October 2024. Study quality was assessed using the Tool to Assess Risk of Bias in Case-Control Studies. Data on odds ratios (OR), confidence intervals (CI) and study features were extracted. Consumption levels were grouped into medium and high, and pooled ORs with 95% CIs were calculated using a random-effects model.

**Results:** Of 154 studies screened, 15 case-control studies from Asia were included. The pooled OR was 1.50 (95% CI: 1.24–1.82, p <0.01), suggesting a 1.5-fold increased cancer risk. Heterogeneity was high ($I^2$ = 81.8%, p <0.01), reflecting differences in methods and potential recall bias. Most studies had medium-low risk of bias; some showed selection bias.

**Conclusions:** Pickled vegetable consumption is linked to higher oesophageal cancer risk, particularly with moderate intake. Due to high heterogeneity, causal conclusions are limited. More prospective studies, especially in Western populations, are needed to clarify regional an dietary influences.

## G17

### Not Every Gallop Is a Horse: A Rare Case of Colorectal Cancer in Pregnancy

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**Background:** Colorectal cancer (CRC) during pregnancy is a rare occurrence with an incidence of 0.002%. About 23% of these patients have a family history of CRC.

**Case presentation:** A 35-year-old woman in the first trimester of pregnancy was referred for evaluation of a microcytic, hypochromic anemia (Hemoglobin 74 g/L). She denied any signs of a gastrointestinal bleeding or B-symptoms. Family history was unremarkable. A former gastroscopy had shown normal gastric and duodenal biopsies, while the colonoscopy revealed atypical white polypoide lesions, possible lymphocytic aggregation. The histology was unavailable. Celiac serology was negative. Based on clinical assessment, there was no strong suspicion of malignancy. After detailed risk-benefit discussion, the colonoscopy was deferred for postpartum. Abdominal ultrasound showed no signs of bowel wall thickening. The patient later sought care at another GI department, where colonoscopy revealed an adenocarcinoma in the ascending kolon. Imaging showed no signs of metastases. A laparoscopic right hemicolectomy was performed. Due to low-risk Stage II disease, adjuvant chemotherapy was not indicated. Five months later, the patient delivered a healthy child at 35 weeks gestation. Genetic testing found no evidence of a hereditary polyposis syndrome.

 

**Discussion:** Endoscopy during pregnancy should be considered carefully and limited to cases with a strong clinical indication. With rising rates of early onset CRC and delayed childbearing, diagnoses during pregnancy are expected to increase. This case highlights the need for individualized risk assessment and challenges in diagnosing CRC in pregnancy.

## G18

### Risankizumab Real World Experience in Switzerland: Report on 130 Patients with Crohn's Disease from 3 IBD centers.

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**Background** Risankizumab (Skyrizi®), an IL-23 inhibitor, has demonstrated efficacy in inducing and maintaining remission in Crohn's disease (CD). We report the largest real-world Swiss experience since its Swissmedic approval in September 2023.

**Methods** We conducted a retrospective chart review of CD patients who received at least one dose of Risankizumab across three IBD centers: Intesto Bern, Fribourg, and Bulle.

**Results** From February 2024 to May 2025, 130 CD patients initiated Risankizumab (53% Bern, 35% Fribourg, 12% Bulle). Gender distribution was balanced (51% female), with a median age of 46 years (range 19–79). Most patients had refractory disease following failure of insufficient response to biologics: primarily Ustekinumab (as last treatment sequence), then Vedolizumab, and anti-TNFs (however, most frequent bio-exposure). A minority were biologic-naïve or received treatment for postoperative maintenance. Over 90% of the CD patients remain on therapy at the end of follow-up, with no new safety signals reported.

**Conclusions** This largest Swiss real-world cohort supports Risankizumab as an effective and well-tolerated treatment option for a wide range of CD patients**.**

## G19

### Feasability of ESD training on ex-vivo animal model in a single university hospital: report of first procedures

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**Background:** It is recommended by the European Society of gastrointestinal endoscopy (ESGE) as well as most endoscopy societies, to train on animal model before practicing ESD on patients. As industrial workshops exist and can be used periodically to achieve this goal with experts, it rarely meets the conditions of a full training. Many models exists either synthetic or biologic from animal specimen. Both "in vivo" and "ex vivo" models have been described, more frequent models are from pig's stomach[1] and bovine rectum-colon origin[2]. Bovine rectum-colon models were used in this project.

**Results:** We report the first cases of "ex-vivo" animal models (rectal-colon bovine) in an animal lab located in Geneva university hospital. Colorectal specimens were collected in a dedicated abatory, approved by veterinary authorities, isolated and freezed to be used later for ESD training. ESD training was performed by a single operator, from October 2024 to May 2025, and 18 complete procedures were done. For each procedure, a simulated oval lesion was represented by dots on the mucosa, by using coagulation mode marking with ESD knife. Dedicated animal use model of Olympus gastroscope (October to November) and colonoscope (April to may) and DualKnife J 1.5mm Olympus were used. Electrosurgical unit was an Erbe ICC 200. Mean area of the specimen was 223,3 mm2 (32;777mm2), mean duration of the procedure was 27,5 minutes (14;54 minutes), dissection speed was 8.3 mm2/min (1.3; 15.3 mm2/min), complete perforation rate was 11% (2/18) and severe defect on the muscle layer was 22% (4/18).

**Conclusion:** We report the feasibility to set up an ESD training on "ex-vivo" bovine models in a university hospital center in Switzerland, in order to perform what is recommended and to train endoscopic skills of third space endoscopy.

– Bok et al. ESD Hands-on Course Using Ex Vivo and In Vivo Models in South Korea. Clin Endosc. 2012
– Pioche M, et al. New isolated bovine colon model dedicated to colonic ESD hands-on training: development and first

## G20

### Harmonizing Gastroenterology Training: An Analysis of European Curricula in the United European Gastroenterology

Sophie Schlosser [1], Jonas Staudacher [2], Verena Wagner [3], Mira Unger [3], Paula Sousa [4], Inga Marie Donning [3], Martina Müller-Schilling [1], Henriette Heinrich [5] on behalf of the GENIUS Study Group (National Societies Forum, National Societies Committee, Young Talent Group & Friends)

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**Introduction:** Gastroenterology is a rapidly evolving medical specialty addressing a wide range of gastrointestinal (GI) disorders. As GI disease burdens rise globally, ensuring standardized and high-quality training programs for gastroenterologists is crucial. However, significant variability exists in training curricula across European countries, necessitating a comprehensive evaluation of national training programs. United European Gastroenterology (UEG) has attempted to harmonize training through the "Blue Book" framework of the European Section and Board of Gastroenterology and Hepatology (ESBGH). Still, disparities persist in curriculum implementation, competency-based learning, and procedural training.

**Methods:** This study was designed as a multicenter, European observational study analyzing gastroenterology curricula across the 47 UEG member states. Data were collected between February 2024 and December 2024 from national gastroenterology societies via direct contact and digital platforms. 42 curricula were retrieved and analyzed regarding competency-based education, procedural training, assessment methodologies, and subspecialization tracks.

**Results:** Across GI training curricula, the median duration was 60 months (IQR 48–72). Only 7.1% allowed part-time training, and <17% early subspecialization. Center requirements (29%), trainer competencies (24%), and formal mentoring (26%) were underdeveloped. Although 78.6% adopted competency-based objectives, EPAs (7.1%), DOPS (9.5%), Mini-CEX (2.4%), and logbooks (42.9%) were infrequent. All programs required basic endoscopy (median 300 gastroscopies/200 colonoscopies), but only 64.3% included advanced procedures, and 16% simulation. Research (76.2%) and soft-skills (11.9%) training were

 

limited; national exams/ESEGH (9.5%) and Blue Book guidance (24%) were rare.

**Discussion:** Competency-based learning is widely implemented, but structured assessment tools remain underutilized. Diagnostic endoscopy training is well integrated, whereas advanced procedures and research components are included inconsistently and lack standardization. Competency examinations are common, yet national standardization and ESEGH integration remain limited. These findings highlight the need for further harmonization in gastroenterology education to ensure a uniformly high standard of training across Europe.

## G21

### Pancreatic polypeptide family secretion in healthy, lean individuals during an endoscopic luminal fat and short-term low-carbohydrate high-fat diet challenges

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** Successfully completed doctoral dissertation*

**Background:** The pancreatic polypeptide (PP) family consists of three polypeptides: neuropeptide Y (NPY), pancreatic polypeptide (PP) and peptide YY (PYY). Despite many structural similarities, PP family members have differing biological effects at various levels of the gastrointestinal tract and nervous system. This study investigates the physiological response of the PP family and its dipeptidylpeptidase IV (DPP4) fragments using microliquid chromatography tandem mass spectrometry to an endoscopic luminal lipid bolus after a 3-day low-carbohydrate high-fat diet (LCHFD) in sedated individuals.

**Methods:** 10 (7 female and 3 male) healthy volunteers underwent an upper endoscopy during which a oleic and linoleic acid emulsion was placed in the gastric antrum and the post-pyloric duodenal bulb. Plasma samples were collected after overnight fasting and at 10, 30, 60, 120, and 180 min following an endoscopic luminal lipid bolus, with the procedure repeated after a three-day isocaloric LCHFD.

**Results:** All PP family members displayed a significant increase in response to an luminal lipid bolus. Additionally, three days of the LCHFD significantly increase the fasting concentrations of native NPY, PP and their DPP4 cleaved fragments but not PYY.

**Conclusion:** Short-term LCHFD within three days can modulate NPY and PP-response pattern suggesting that a short-term diet may influence appetite regulation via entero-hormonal signaling.

## G22

### Improvement in Fatigue with Mirikizumab Therapy and Associations with Clinical Outcomes in Patients with Moderately-to-Severely Active Crohn's Disease: Results from the PHASE 3 VIVID-1 Study

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**Aims:** We examined the association of clinical, endoscopic (endo), biomarker and symptom outcomes with fatigue in patients with Crohn's disease (CD) in VIVID-1 treated with mirikizumab (MIRI), an anti-IL-23p19 monoclonal antibody.

**Methods:** Adult patients (N = 1065) with moderately-to-severely active CD were randomized 6:3:2 to MIRI, ustekinumab or placebo. MIRI was given every 4 weeks (W) as 900 mg intravenous W0, W4, and W8, then 300 mg subcutaneous W12 to W52. Pearson correlation coefficient was used to assess the continuous endpoints.

**Results:** At W52, 50.9% (268/527) of MIRI-treated patients achieved Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F) ≥6-point increase from baseline. Greater proportions of patients who achieved clinical and endo outcomes had ≥6-point increase in FACIT-F ($p < 0.05$) vs. those who did not achieve the outcome. There was weak/moderate correlation between change from baseline at W52 in abdominal pain, stool frequency and log-transformed fecal calprotectin and C-reactive protein, and the CFB in FACIT-F at W52.

**Conclusion:** In patients with moderately-to-severely active CD treated with MIRI, improvements in clinical, endoscopic, and selected patient-reported outcomes were associated with clinically meaningful improvements in fatigue at W52.

 

## POSTER: HEPATOLOGY

### H1

### Use of Maralixibat for treatment-resistant pruritus in intrahepatic cholestasis of pregnancy: A case report

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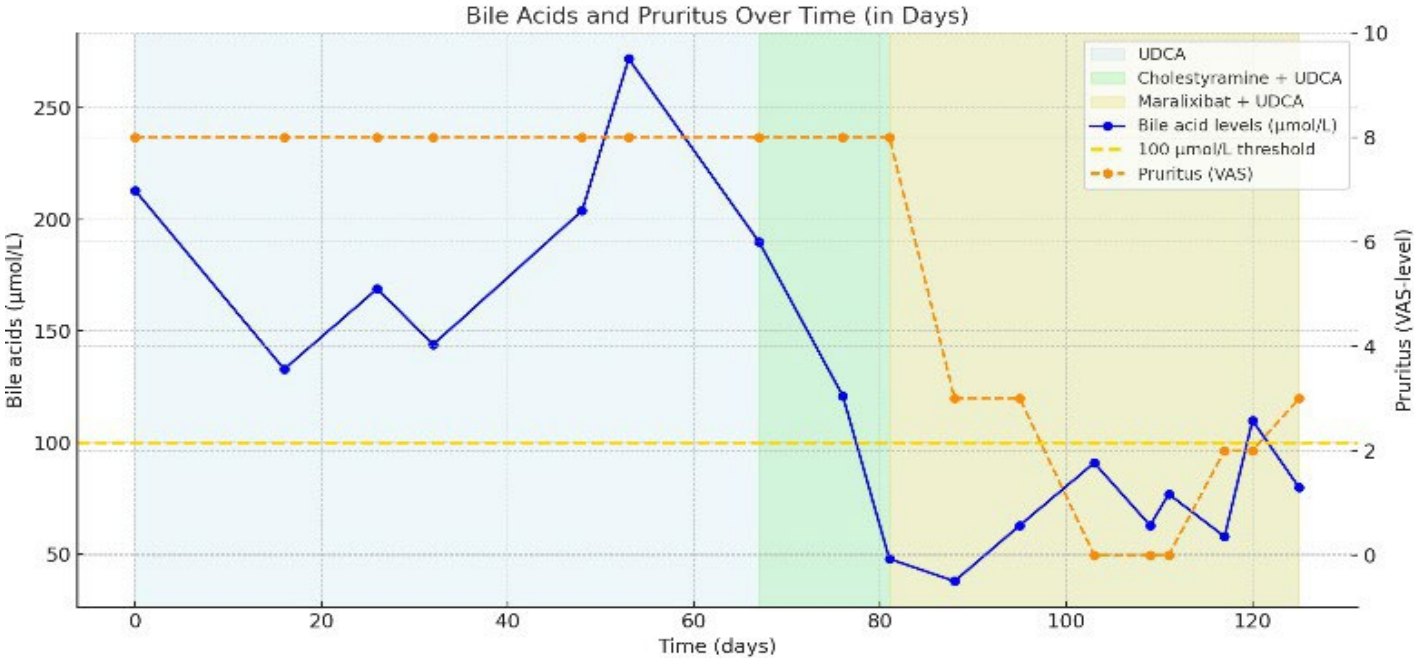
**Background:** ICP is a rare liver disorder in pregnancy with elevated bile acids and pruritus. UDCA is the current standard of care; its antipruritic efficacy is limited. Ileal bile acid transporter (IBAT) inhibitors, such as Maralixibat, may offer a novel treatment approach. Data on pregnant patients is currently lacking.

**Methods:** Single case report of a 34-year-old pregnant woman presenting with severe pruritus in the context of ICP and previously undiagnosed PBC. Following inadequate response to conventional treatment, Maralixibat was initiated at 30 weeks of gestation.

**Results:** Treatment with Maralixibat led to rapid and substantial improvement in pruritus. Diarrhea developed at higher dosages but was managed with dose adjustment. Labor was induced at 35+6 weeks due to rising bile acids. Both mother and newborn had a favorable outcome.

**Conclusions:** This case highlights the potential of IBAT inhibition as a promising adjunct therapy for treatment-resistant pruritus in ICP.




### H2

### Feasibility, safety and effectiveness of Transjugular liver biopsy with previously placed transjugular intrahepatic portosystemic shunt: a case series

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**Background:** Performing a transjugular liver biopsy (TJLB) in patients with a TIPS is a technical challenge. Given limited prior data on TJLB's feasibility, safety and efficacy in these patients (one cohort of seven patients), our study assessed these parameters within our tertiary care center cohort.

**Methods:** From 04/2007 to 03/2025, 43 patients (M/F: 24/19, mean age 53.2 years, mean MELD 20, mean CHILD C10) with a TIPS underwent a TJLB with regard to coagulopathy (72%), ascites (16%) or other reason (12%). Indication, time between TIPS and TJLB, technical success rate, quality of the biopsy and complications were assessed.

**Results:** Indication for a liver biopsy included a suspicion of alcoholic hepatitis (44%), pre-transplant evaluation (37%) and other (19%). Technical success was achieved in 29 patients (67%) with sufficient tissue in 27 patients (63%). The reasons for failure were: difficulty to catheterise the TIPS (21%), occluded TIPS (21%), TIPS composition (14%) and unspecified (44%). Complication rate was 7%, including a subacute occlusion of the TIPS 4 days after TJLB (2.3%), a bleeding complication possibly related to the TJLB (2.3%), and a further deterioration of renal function within a month after the procedure (2.3%).

**Conclusion:** When indicated, TJLB in patients with TIPS is a feasible and safe procedure. To our knowledge, this is the largest cohort of patients with TIPS undergoing TJLB.

## H3

### DNA Replication Stress in MASH

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**Background:** MASLD is an increasing health problem characterized by the accumulation of liver-fat, which can progress to MASH, a more severe stage of the disease characterized by liver inflammation and reactive oxygen species (ROS) accumulation. These two hallmarks are believed to drive MASH into HCC, although the molecular mechanisms are not well understood. We hypothesize that MASH livers face chronic proliferation, which amplifies underlying DNA damage caused by ROS accumulation, resulting in HCC formation.

**Methods:** We used a MC4R KO mice model to mimic MASLD, MASH and HCC; depending on their diet and harvesting age. Liver samples were collected and embedded for histology, or snap frozen for RNA/protein extraction. Proliferation was stimulated in MASLD livers by 2/3 partial hepatectomy (PHx) surgery. Origin of replication (ORI) firing mapping was used to further characterize DNA replication as per our latest publication (Giacomo et al., Cell, 2024).

**Results:** We validated that our MASH mouse model presents inflammation (histology, RNAseq) and faces ROS accumulation (8-oxo-2'deoxyguanosine staining and oxidative stress RNAseq response), this last one also observed in MASLD. We then showed that MASH livers present basal proliferation (Ki67 expression and RNAseq), DNA damage (γH2AX expression) and increased DNA damage response (RNAseq and protein RAD51/53BP1 expression). To further confirm our hypothesis, we did PHx to MASLD livers, pushing their proliferation, and showed impaired liver regeneration and ORI firing. Upon ATRi treatment (blocking DNA damage repair), MASLD livers restored their ORI firing efficiency.

**Conclusions:** MASH livers face chronic proliferation, which amplifies underlaying DNA damage caused by ROS accumulation, ultimately driving HCC formation.

## H4

### The changing pattern of liver related specialist consultations in Southern Switzerland between 2009 and 2024

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**Background:** Hepatology has been a rapidly evolving field of medicine especially in the last two decades with an enormous boost in innovation both in diagnosis and treatment in the face of changing epidemiological circumstances. The detection of emerging patterns is crucial in order to determine future resource allocation and to define the skillsets needed for future hepatologists. The aim of our study is to retrospectively determine the evolution of the primary liver related diagnosis of patients seen in our outpatient clinics situated in 8 different locations throughout in the Canton Ticino over a period of 15 years (2009-2024).

**Methods:** The study was conducted at Epatocentro Ticino, a group practice specialized in the care of patients with all types of liver diseases. The first 200 consecutive patients sent by their primary care physicians for specialist evaluation in the years 2009, 2014, 2019 and 2024 were considered. Viral hepatitis (HAV, HBV, HCV, HDV and HEV), non-alcoholic fatty lived diseases (NAFLD), non-alcoholic steatohepatitis (NASH), alcoholic fatty liver disease (AFLD), autoimmune liver disease (AILD), iron-related liver diseases (Wilson disease, iron overload related liver disease), liver lesions (focal liver lesion, hepatocellular carcinoma, cystic liver disease) and other (gallstone associated liver disease, Alfa-1 anti-trypsin deficiency, vascular liver disease, cryptogenic liver disease) were included.

**Results:** In total, 1695 patients to reach 200 patients/considered year who had a first consultation at Epatocentro Ticino because of a liver disease were randomly selected. 895 were excluded: 200 had been previously followed at the Centre, and 695 did not have a specific liver-related condition. Results are shown in figure 1; in 2009 the main cause of consultation was HCV (36.5%), followed by HBV (15.5%) and NAFLD (13.5%). In 2014 and 2019 changes in prevalence were noted with an increase of NAFLD/AFLD and a progressive decrease of HCV/HBV infections. In 2024 the most common reasons for consultation were NAFLD (38%) and AFLD (16%) vs HBV and HCV 5.5% and 3.5%, respectively. Other causes of consultation have remained stable throughout the included years, such as AILD and iron-related diseases; focal liver lesions decreased from 8 to 4%.

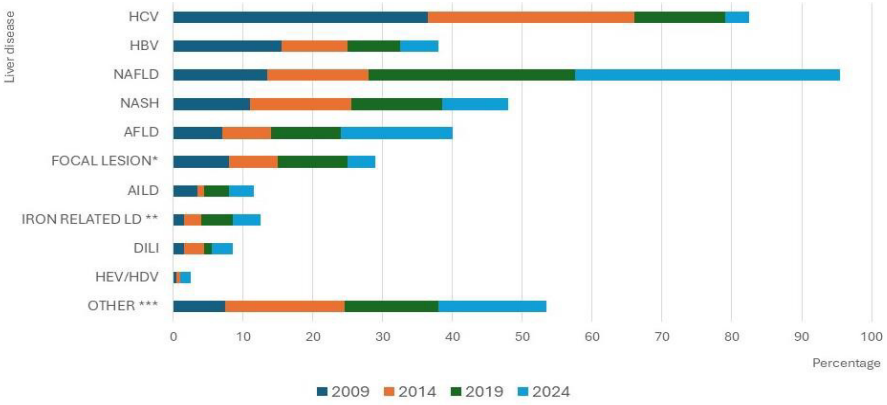


Figure 1: Prevalence of causes of liver consultation in 2009, 2014, 2019, and 2024.

* Focal liver lesion, Hepatocellular carcinoma, cystic liver disease
** Wilson disease, Iron overload related liver disease
*** Gallstone associated liver disease, Alfa-1 anti-trypsin deficiency, vascular liver disease, cryptogenic liver disease

**Conclusions:** Our results underline the rapid evolution of liver diseases and the prevalence of liver-associated diagnosis. During the last decades, lifestyle and metabolic associated comorbidities have replaced viral hepatitis and our data are in line with this trend. We are now challenged with a multidisciplinary management of our patients that reflects the importance of specialists networking, collaborating and creating new alliances. Moreover, metabolic disorders being closely linked to the emerging liver diseases, preventive medicine is and will be paramount in the cure of patients. Public health resource allocation as well as specific training curricula should consider these rapidly evolving trends.

## H5

### Ursodeoxycholic acid response in the Swiss Primary Biliary Cholangitis Cohort Study

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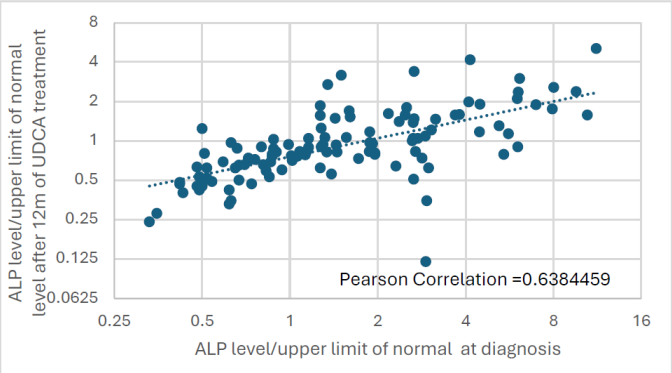
**Background:** Ursodeoxycholic acid (UDCA) is the first-line therapy for primary biliary cholangitis (PBC). Normalization of alkaline phosphatase (ALP) on UDCA is associated with improved survival.

**Aim:** To evaluate the rate of ALP normalization after one year of UDCA treatment in Switzerland and to correlate ALP levels at diagnosis with those after 1 year of UDCA.

**Methods:** PBC patients from the Swiss PBC Cohort Study 2017-2024 who received UDCA monotherapy for one year were studied.

**Results:** 117 patients are included, 101(86%) females, median age at diagnosis 57 years. 72 (61%) achieved ALP normalization after 1 year of UDCA monotherapy (median dose: 950 mg/d; IQR 750-1000mg/d), normalization correlating with baseline levels.

**Conclusions:** Insufficient UDCA response is common, highlighting the need for second-line treatments. 36% of patients had normal ALP level at diagnosis, having mild disease with early-stage histological changes.




## H6

### Treatment-Resistant Pruritus in Secondary Sclerosing Cholangitis: Marked Symptom Improvement with Maralixibat – A Case Report

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**Background:** Pruritus is a common and burdensome symptom in cholestatic liver diseases, particularly in rare entities such as secondary sclerosing cholangitis (SSC). Ileal bile acid transporter (IBAT) inhibitors represent a novel therapeutic class, currently approved for specific cholestatic disorders. These include maralixibat and odevixibat, which have been approved in different countries for treatment of cholestatic pruritus in Alagille syndrome and/or progressive familial intrahepatic cholestasis (PFIC). Other IBAT inhibitors such as linerixibat are under investigation for treatment of pruritus in patients with primary biliary cholangitis. By inhibiting intestinal reabsorption of bile acids, these agents reduce serum bile acid levels and pruritogenic metabolites. However, data on their efficacy in cholestatic conditions outside approved indications remain limited.

**Methods:** We report on a 32-year-old male patient with secondary sclerosing cholangitis following Kasai portoenterostomy for congenital biliary atresia, who suffered from long-standing, treatment-resistant pruritus. Previous therapies including colestyramine, ursodeoxycholic acid, rotating antibiotic regimens for ascending bacterial cholangitis and plasmapheresis (double plasma molecular adsorption system, DPMAS) failed to achieve sustained symptom control. In 10/2024, off-label treatment with the IBAT inhibitor maralixibat (Livmarli) was initiated after negotiations with the health insurance and the pharmaceutical company. Tolerability, symptom severity, and laboratory parameters were closely monitored.

**Results:** The initial dose (190 mcg maralixibat/kg body weight) was increased to 380 mcg/kg on day 8 according to the drug label. After transient gastrointestinal side effects (diarrhea), the patient experienced a rapid and profound reduction in pruritus within 10 days, leading to a significant improvement in quality of life. Serum bile acid levels decreased markedly from 87–116 µmol/L prior to IBAT therapy to 41–47 µmol/L (normal <6.0 µmol/L) on maralixibat. Liver function remained preserved, with stable INR and albumin levels. Notably, no further plasma exchange treatments were required after initiating maralixibat. Diarrhea stopped after dose reduction to 190 mcg/kg. The patient continues therapy and remains free of pruritus.

**Conclusions**: This case illustrates that off-label use of maralixibat can lead to significant pruritus relief and bile acid reduction in patients with cholestatic liver diseases outside current approval indications, such as secondary sclerosing cholangitis. The successful outcome in this patient underscores the potential role of IBAT inhibitors in different cholestatic diseases. Further clinical studies are warranted to evaluate safety and efficacy in such settings.

## H7

### Effect of liver cholestasis on inflammatory stressors in the intestine

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**Background:** Primary sclerosing cholangitis (PSC) is a cholestatic liver disease frequently associated with inflammatory bowel disease (IBD), particularly ulcerative colitis (UC). However, it is not fully understood to which extent liver injury is involved in the development of IBD and the mechanisms that drive it. Here, we used models of liver cholestasis in combination with gut inflammation to study disease along the gut-liver axis.

**Methods** A model of chemically induced liver cholestasis (alpha naphthylisothiocyanate (ANIT) *per os*) mimicking varying severities of PSC and 2.5% dextran sodium sulfate (DSS) for four days to induce acute colitis was used. Body weight, colon length, epithelial barrier integrity, and liver pathology were evaluated. Colon damage was assessed by hematoxylin and eosin (H&E) staining for crypt architecture and Alcian Blue-PAS staining for goblet cells. Baseline transepithelial resistance was measured using an Ussing Chamber.

**Results:** We observed in mice with less liver cholestasis exhibited less weight loss, less colon shortening when treated with DSS compared to mice with more severe injury. Histological analysis showed mice with less liver injury had better preservation of crypt structure in colon. More severe liver injury correlated with a reduced number of acidic goblet cells. No difference in gut baseline transepithelial resistance was observed.

**Conclusion:** The extend of liver cholestasis injury may affect the development and severity of colitis. Our ongoing studies aim to uncover the molecular mechanisms involved in the disease initiating factors of IBD.

## H8

### Planned Treatment of Chronic Hepatitis C Virus Infection During Pregnancy: First Reported Case in Switzerland

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**Background:** Chronic hepatitis C virus (HCV) infection during pregnancy results in perinatal transmission in approximately 3% to 6% of cases. Risk factors for transmission include antepartum bleeding, HIV co-infection and high maternal HCV viral load (particularly $>10^6$ IU/ml). Potential benefits of HCV treatment during pregnancy include reduced risk of perinatal HCV transmissions and mitigation of HCV-associated pregnancy complications such as cholestasis, fetal growth restriction, and preterm birth. However, due to lack of clinical trial data, HCV treatment during pregnancy has not yet been recommended. Recent interim results from the phase IV STORC study (ClinicalTrials.gov ID NCT05140941) have shown reassuring safety and efficacy data for the administration of sofosbuvir/velpatasvir (SOF/VEL) after 20 weeks' gestation. Here, we report the first planned case of HCV treatment with SOF/VEL in a pregnant patient in Switzerland with a high viral load and a history of perinatal HCV transmission in a previous pregnancy.

**Methods:** A 41-year-old woman with chronic HCV infection (genotype 1a; high viral load $10^{6.86}$ IU/ml; ALT 2-3x ULN; normal liver stiffness: 4.9 kPa; HIV negative; vaccinated against HAV and HBV) was referred for antiviral therapy. HCV infection was first diagnosed in 2011, with intravenous drug use as the presumed source of transmission. The patient has an 8-year-old daughter with chronic HCV acquired via perinatal transmission, who is currently also being evaluated for HCV treatment. At the planned start of antiviral therapy in 12/2024, the patient was found to be pregnant (gestational week 6). An off-label treatment approach was discussed in detail with the patient over multiple consultations, based on the most recent safety data. Following shared decision-making involving obstetricians, pediatricians, hepatologists and a nurse specialist, treatment during pregnancy was deemed appropriate. This decision was based on her previous experience of perinatal transmission, current high viral load, the availability of safety data from the STORC study, and informed patient consent.

**Results:** HCV treatment with SOF/VEL was initiated after the embryogenesis phase at week 29 of gestation. HCV viral load was undetectable 4 weeks after treatment initiation, and transaminases normalized. Treatment was well tolerated, with no adverse maternal or fetal events reported by week 36. Pregnancy progressed without complications and with normal prenatal ultrasound findings. The patient elected to deliver via planned cesarean section at week 38 (scheduled for June 2025). The 12-week course of SOF/VEL will be completed approximately two weeks postpartum. Sustained virologic response (SVR12) will be assessed 12 weeks after the end of treatment.

**Conclusions**: Current international guidelines (EASL, AASLD, WHO) do not yet recommend routine antiviral therapy for HCV during pregnancy to prevent perinatal transmission. However, emerging safety and efficacy data from the STORC study support individualized decision-making. Antiviral therapy during pregnancy should be carefully evaluated and, when appropriate, based on interprofessional and interdisciplinary consensus.

## H9

### Intracavitary Antibiotic Instillation for Refractory Liver Abscess: Proof of Principle

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**Background:** Liver abscesses are serious complications that can occur spontaneously or following interventions such as percutaneous tumor ablation. While percutaneous drainage combined with systemic antibiotics remains the standard of care, some cases prove refractory to conventional therapy. We present a case of a post-ablation liver abscess that was successfully treated through repeated intracavitary instillation of imipenem, following a prolonged and unsuccessful course of systemic antibiotics and saline-based drainage. This approach may offer a viable alternative for difficult-to-treat abscesses.

**Methods:** A 68-year-old cirrhotic patient developed a gas-and fluid-containing liver abscess in segment VIII following CT-guided microwave ablation of a solitary hepatocellular carcinoma. Over a 3-month period, the patient underwent three separate percutaneous drainages and received prolonged oral and intravenous antibiotic therapy (co-amoxicillin, imipenem, amoxicillin, moxifloxacin), without sustained clinical or radiological improvement. Cultures repeatedly showed Enterococcus faecalis, Enterococcus gallinarum, and Escherichia coli. As a salvage approach and according to bacterial resistance testing,

 

we initiated eight sessions of local imipenem instillation (100 mg in 20 mL saline) directly into the abscess cavity via a pigtail drainage catheter over the course of 24 days. In addition, the patient received systemic therapy (moxifloxacin 400 mg qd po). The patient was monitored clinically, radiologically, and biochemically throughout treatment and thereafter.

**Results:** The patient tolerated the intracavitary therapy well, reporting only mild, transient nausea during application. C-reactive protein normalized and the patient became clinically asymptomatic. Final abdominal sonography showed complete resolution of the fluid component within the abscess cavity. Drainage was removed following interdisciplinary consensus 4 weeks after insertion (5 days after last imipenem instillation). Moxifloxacin was stopped 7 days after the last imipenem instillation. No recurrence has been observed for 12 months, and no further antimicrobial therapy was required.

**Conclusions**: This first case in the literature demonstrates that intracavitary instillation of antibiotics may be a safe and effective salvage strategy for refractory liver abscesses, particularly when conventional treatments fail. Further studies are needed to assess the broader applicability and long-term outcomes of this approach, but it may serve as a valuable tool in select complex cases.

**H10**

### Chronic Hepatitis E in Immunocompromised Patients: A Case Series with Diverse Presentations and Therapeutic Challenges

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**Background:** Chronic infection with hepatitis E virus (HEV) is an uncommon but increasingly recognized condition that occurs almost exclusively in immunocompromised individuals. Unlike acute HEV, which is usually self-limiting, chronic HEV (defined as detectable HEV RNA for more than 6 months) can lead to progressive liver damage and fibrosis. It is most commonly associated with solid organ transplantation, hematological malignancies, and autoimmune diseases requiring immunosuppressive therapy. Diagnosis is often challenging, particularly as HEV serologies may be unreliable in immunocompromised patients. Ribavirin remains the first-line therapy, though treatment response varies depending on host factors and immune reconstitution.

**Methods:** We retrospectively identified all patients with chronic HEV infection, defined per EASL clinical practice guidelines (Dalton HR et al., J Hepatol 2018), seen at our hepatology center (>10,000 patient visits/year) between 01/2014 and 05/2025. Clinical presentation, HEV serology, PCR, liver histology, and response to antiviral therapy were reviewed.

**Results:** Three patients (one female, two males; ages 65-68) were identified. All had received immunosuppressive therapy: tacrolimus post-liver transplantation, rituximab for lymphoma, and infliximab with prednisolone for sarcoidosis. HEV serology was false-negative in 2 of 3 patients, with diagnosis established by positive HEV RNA PCR. Diagnostic delay ranged from 1 to 21 months. At diagnosis, HEV viral loads ranged widely (18,950-14,335,000 IU/mL) and ALT levels from 89 to 674 U/L. Liver histology varied significantly, from mild portal inflammation with HEV-ORF2 positivity to acute necroinflammatory activity with fibrosis (A2 F1). All patients received ribavirin (initial dose 600 mg/day) and immunosuppression was reduced where feasible. The post-transplant patient cleared HEV after 8 weeks; ribavirin was stopped at 12 weeks. The sarcoidosis patient cleared the virus after 5 weeks of ribavirin and withdrawal of infliximab. The rituximab-treated patient has not achieved viral clearance despite 48 months of ribavirin, IVIG for hypogammaglobulinemia, off-label sofosbuvir for 24 weeks, and stopping rituximab 50 months ago. However, HEV RNA remains below quantification (<200 IU/mL vs. initially 14,335,000 IU/mL) with normal ALT (initially 674 U/l) and liver stiffness (5.0 kPa).

**Conclusions**: Chronic HEV infection presents with diverse clinical and histological features, ranging from asymptomatic transaminases elevations to severe hepatitis. Diagnostic delay is common, especially with false-negative serologies in immunocompromised hosts. PCR testing is essential. Reduction of immunosuppression and ribavirin therapy remain the cornerstones of treatment. Individualized strategies may be needed in difficult-to-treat cases.

## POSTER: SURGERY

**S1**

### Laparoscopic-assisted Pancreatic Necrosectomy (LAPN) In The Treatment Of Walled Off Pancreatic Necrosis: A Retrospective Study

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**Background:** The step-up approach combining percutaneous drainage with laparoscopic-assisted pancreatic necrosectomy (LAPN) or transgastric necrosectomy shows a lower incidence of complications and mortality than open necrosectomy in the treatment of necrotizing pancreatitis. This study aimed at comparing surgical and endoscopic step-up approach.

**Methods:** A retrospective analysis of patients with infected necrotizing pancreatitis treated using the step-up approach between 2019 and 2023 was conducted. Treatment involved drainage followed by surgical or endoscopic necrosectomy if needed. Primary endpoint were major complications and 6-month mortality.

**Results:** Eighteen underwent the surgical step-up approach, consisting of CT-guided drainage, followed by LAPN in 11 cases (61.1%). Thirteen patients were treated endoscopically which involved transgastric drainage, followed by necrosectomy in 7 cases (53.8%). Major complications or death occurred in 54.5% of the surgical and in 57.1% of the endoscopic group. In each group one intraoperative and six postoperative complications were reported. Four patients required LAPN after endoscopic necrosectomy due to insufficient improvement.

**Conclusion:** Our findings indicate that both LAPN and endoscopic necrosectomy are effective in controlling local and systemic infection. LAPN remains important in managing extensive infected necrosis, particularly when transgastric methods cannot fully address the infection or when there is no direct contact to the gastric wall.

 

## S2

### ΔWeight is a Predictor of Major Complications After Digestive Surgery

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**Background:** Reliable predictors of major postoperative complications (mPOC) are lacking in digestive surgery (DS). This study aimed to evaluate postoperative weight gain (ΔWeight) as potential predictor of mPOC after DS.

**Methods:** Retrospective monocentric analysis of patients undergoing DS in 2013-2022. DS was defined as operations of ≥120 min including upper-GI, HPB and colorectal surgeries. ΔWeight was calculated on postoperative day 2. Primary outcome was mPOC according to Clavien classification (grades ≥III).

**Results:** MPOC occured in 392 (27.9%) of 1407 patients. Median ΔWeight was 2.1 Kg (0.4-4.3). Patients with and without mPOC had a median ΔWeight of 3.5 Kg (1.5-6.1), and 2.0 Kg (0.3-4.1), respectively (p <0.001). A discriminant cut-off of 2.6 Kg was determined using Youden's maximum index. Multivariable analysis identified ΔWeight ≥2.6 Kg as independent predictor of mPOC (OR, 1.43; 95% CI, 1.02-2.00; p = 0.039).

**Conclusion:** Perioperative weight monitoring is critical. ΔWeight is an independent modifiable predictor of mPOC that may facilitate risk stratification and help postoperative optimisation.

## S3

### Meta-analysis of intraumbilical versus periumbilical incision in laparoscopic appendectomy

Justyna Mohr, Pascal Probst, Pia Antony, Dirk Kleindienst, Fabian Hauswirth, Markus K. Muller, Pietro Renzulli

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**Background:** Laparoscopic appendectomy has become the standard treatment for acute appendicitis. However, surgical site infections still occur in up to 8% of patients. The aim of this review was to compare the short-term outcomes of an intraumbilical incision.

**Methods:** A systematic literature search was performed in CENTRAL, PubMed, Embase and Web of Science. All RCTs comparing intraumbilical with periumbilical incision port placement were included. Outcomes were analysed as odds ratios (OR) or mean differences (MD) in a random-effects model. Risk of bias (Cochrane 2.0) and certainty of evidence (GRADE) were assessed.

**Results:** Six RCTs from Asia with 1576 patients were included. No difference in operation time was noted (MD -1.57 minutes, 95%-CI: -5.30 to 2.16, p = 0.41) Further, intraumbilical incision had similar internal organ injury (OR 0.69, 95%-CI: 0.33 to 1.43, p = 0.38) and umbilical surgical site infection (OR 0.76, 95%-CI: 0.40 to 1.44, p = 0.40). All RCTs had considerable risk of bias.

**Conclusions:** The evidence suggests that there is little to no difference in any of the clinical short-term outcomes between intraumbilical and periumbilical port placement in laparoscopic appendectomy. Surgeons should use their preferred approach. The body of evidence would benefit from a high-quality RCT in a western population and from data on long-term outcomes.

## S4

### Meta-Analysis of Intraabdominal Drainage After Distal Pancreatectomy

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**Background:** Intraabdominal drainage (IAD) after distal pancreatectomy was long considered standard. Recently, emerging evidence became available that intraabdominal drainages can be omitted. The aim of this study was to investigate the potential harm and benefit of intraabdominal drainages after distal pancreatectomy.

**Methods:** The ISGPS Evidence Map of Pancreatic Surgery was searched. All RCTs on distal pancreatectomy comparing IAD versus no drainage were included. Outcomes were analysed as odds ratios (OR) or mean differences (MD) in a random-effects model. Risk of bias (Cochrane 2.0) and certainty of evidence (GRADE) were assessed.

**Results:** Three RCTs with a total of 429 patients have been included. Two of the three RCTs were at low risk of bias, while in one RCT some concerns remained. IAD showed less postoperative pancreatic fistula (OR 0.52, 95%-CI: 0.36 to 0.77, p <0.01, GRADE: moderate) and shorter length of hospital stay (-0.44 days, 95%-CI: -0.75 to -0.12, p <0.53, GRADE: moderate). There was no difference in other outcomes.

**Conclusions:** Current RCTs show that omitting IAD after distal pancreatectomy is safe and maybe even associated with less complications. More RCT are needed in patients at high risk for postoperative pancreatic fistula.

## S5

### Meta-analysis of different techniques for pancreaticojejunostomy after partial pancreatoduodenectomy

Annika Wenzel, Hendrik Strothmann, Pia Antony, Pietro Renzulli, Fabian Hauswirth, Markus K Müller, Pascal Probst

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**Background:** Various anastomotic techniques for pancreaticojejunostomy (PJ) in partial pancreatoduodenectomy (PD) have been developed in order to reduce the rate of postoperative pancreatic fistula (POPF) and therefore improving outcome. This study compares different techniques of PJ in PD.

**Methods:** A systematic search for randomized clinical trials (RCTs) was performed in PubMed, CENTRAL, and Web of Science. A meta-analysis using the random-effects model was performed if at least three RCTs were available for a given anastomotic technique. Risk of bias (Cochrane 2.0) and certainty of evidence (GRADE) were assessed.

**Results:** Seventeen RCTs were included. Three RCTs compared mattress suture PJ with duct-to-mucosa PJ. There was no difference regarding POPF (OR 1.2, 95%-CI: 0.66 to 1.27; p = 0.56) with a low certainty of evidence. Seven RCTs compared invagination-end-to-side PJ with duct-to-mucosa PJ. There was no difference regarding POPF (OR 0.73, 95%-CI: 0.35 to 1.53; p = 0.41) with a moderate certainty of evidence. Another seven RCTs investigated various anastomotic techniques for PJ in PD.

**Conclusions:** Mattress suture, invagination end-to-side and duct-to-mucosa techniques are most common for PJ in PD. No technique proved to be superior with regard to POPF. Surgeons should use the technique in which they are best trained and most experienced.

 

## S6

### Systematic Review of access routes and anastomotic techniques in right hemicolectomy and ileocolic resection

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**Background:** Various surgical techniques exist to conduct a right hemicolectomy or ileocolic resection. The aim of this study was to investigate the impact of various access routes and different anastomotic techniques.

**Methods:** A literature search was done in CENTRAL, Medline, and Web of Science for all RCTs investigating patients undergoing right hemicolectomy or ileocolic resection. Outcomes were analysed as odds ratios (OR) or mean differences (MD) in a random-effects model. Risk of bias (Cochrane 2.0) and certainty of evidence (GRADE) were assessed.

**Results:** Thirty RCTs with 3666 patients were included. Twelve RCTs compared laparoscopic with open surgery. The minimal-invasive approach led to fewer complications (OR 1.75, 95%-CI: 1.24 to 2.46, p = 0.01) and a shorter hospital stay (MD 1.4 days, 95%-CI: 1.27 to 1.54, p = 0.01). Nine RCTs compared extra- with intracorporeal anastomosis and found fewer surgical site infection (OR 3.04, 95%-CI: 1.33 to 6.98, p = 0.01) in the intracorporal group. Other interventions compared were hand-sewn vs. stapler anastomosis, end-to-end vs. side-to-side anastomosis and iso- vs. anisoperistaltic anastomosis.

**Conclusions:** This comprehensive systematic review provides key evidence on surgical approaches and anastomotic techniques in right hemicolectomy and ileocolic resection.

## S7

### Ischemic colitis in an elderly patient with intestinal malrotation: A diagnostic challenge

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**Background:** Intestinal malrotation is a rare congenital anomaly in adults and is usually asymptomatic. When present, it may obscure clinical and radiological findings, especially in acute abdominal conditions. A case of ischemic colitis in an elderly patient, in whom congenital malrotation complicated the diagnostic process, is presented in this case report.

**Methods:** The diagnostic work-up included laboratory testing, abdominal CT with contrast, CT angiography, and colonoscopy. Due to imaging findings suggestive of volvulus of small bowel and suspected malrotation, an exploratory laparoscopy with adhesiolysis was performed. During colonoscopy biopsies were taken.

**Results:** A congenital intestinal malrotation with fixed rotation of the colon and duodenum around the mesenteric vessels was confirmed intraoperatively. There were no signs of volvulus, obstruction or venous congestion present, therefore, the malrotation was not surgically corrected. Histology of the colonic biopsies confirmed ischemic colitis. The patient improved under further conservative treatment and was discharged in stable condition.

**Conclusion:** Although it was not the cause of ischemia in the presented case, the malrotation with fixed volvulus-like anatomy complicated radiological and intraoperative interpretation. This case highlights the importance of recognizing anatomical variants as potential confounders in elderly patients with non-specific gastrointestinal symptoms.

## S8

### Machine Learning for detecting Dose Optimization Potential in Computed Tomography Scans of the Abdomen

Daniel Reksten, Johannes Boos, Andrea Steuwe, Benedikt Kamp, Joel Aissa, Christian Rubbert

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**Background:** Machine Learning (ML) has been shown to detect dose optimization potential (DOP) in CT imaging of the chest, even when national reference levels (NRL) were not exceeded. We evaluated a comparable approach for the abdomen, with the ultimate goal of reducing the radiation dose of patients with an abdominal pathology.

**Methods:** Eight different ML algorithms were trained on 39644 subjects to predict the Computed Tomography Dose Index ($CTDI_{vol}$). The trained models were evaluated on a separate test dataset (n = 100), in which DOP had been flagged by two radiologists. A substantial gap between the predicted and actual $CTDI_{vol}$ of a given examination is interpreted as DOP, ideally corresponding with the opinion of the radiologists.

**Results:** The best performing model detected 60% of the examinations with DOP as flagged by the radiologists. NRL identified 20%.

**Conclusions:** ML may be a valuable tool to detect subjects with individual dose optimization potential in CTs of the abdomen, even when national reference levels were not exceeded.

## S9

### The first single port robotic gastric wedge resection in Switzerland – a video vignette

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**Background:** The introduction of the da Vinci Single-Port (SP) robotic system represents another advancement in minimally invasive surgery. However, its application in upper gastrointestinal (GI) procedures is still limited. We present the first documented da Vinci SP-assisted gastric wedge resection for a gastrointestinal stromal tumor (GIST) in Switzerland.

**Methods:** A 74-year-old female presented with a mass initially misinterpreted as an accessory spleen for over four years. Further evaluation with endoscopic ultrasound and biopsy confirmed a 27 × 23 mm GIST located on the posterior gastric wall. A da Vinci SP-assisted gastric wedge resection was performed.

**Results:** A 5 cm periumbilical incision was made to place the SP access port. After entering the omental bursa, the tumor was visualized on the posterior gastric wall. Retraction of the stomach was achieved by placing a holding suture, which was grasped by one of the robotic instruments. The lesion was resected using monopolar scissors, maintaining a safety margin of approximately 1 cm. Intraoperative frozen section analysis confirmed tumor-free resection margins. No additional trocars were required. Final histopathology identified a 3.2 cm GIST (pT2) with low mitotic activity and confirmed an R0 resection. The patient had an uneventful postoperative course and was discharged on day 4. At the 6-week follow-up, she was in good general condition, had resumed a normal diet, and showed a well-healed, non-irritated scar.

**Conclusions:** This case highlights the technical feasibility and safety of single-port robotic gastric wedge resection using the

 

da Vinci SP system. It represents an important step in the learning curve toward more complex minimally invasive oncologic procedures in the upper GI tract.

## S10

### Impact of patient sex on treatment strategy and long-term survival of esophageal cancer

Pauline Curchod[1], Chloé Aeschlimann[2], Sergio Gaspar Figueiredo[1], Hugo Teixeira Farinha[1,2], Clarisse Dromain[2,3], Markus Schäfer[1,2], Styliani Mantziari[1, 2]

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**Background:** Although the impact of patient sex on cancer diagnosis and treatment is increasingly considered in recent years, scarce data exist specifically for esophageal cancer (EC). Aim of the present study was to analyse the impact of patient sex of oncologic treatment strategies and survival of EC.

**Methods:** Retrospective analysis of all EC patients discussed in our institutional multidisciplinary tumor board between 01.01.2016 and 31.12.2020. Clinical characteristics, tumor stage, treatment strategy, and long-term survival were assessed for all patients. Treatment details and long-term outcomes were compared between male (M) and female (F) patients.

**Results:** We analyzed data from 164 patients (81.1% men, mean age 65.7 ± 10.3 years). Malnutrition was more frequent in females ($p < 0.001$). No differences were found in obesity, alcohol consumption or smoking, although females had higher rates of previous chest radiation (19.4%vs 4.5%M, $p = 0.004$). Squamous cell cancer was more predominant in females (70.1% vs 39.8% M), and adenocarcinoma in males (50.4% vs 25.8% F) ($p = 0.037$). No differences were found in the interval between diagnosis and treatment, use of neoadjuvant therapy, or surgical approach. Overall survival was similar between M and F patients, within each histological type and disease stage.

**Conclusion:** In the present series, females presented higher rates of squamous cell histology and malnutrition upon diagnosis. However, no sex-specific differences were observed in treatment choices or overall survival of esophageal cancer, adjusted for histological type and stage.

 

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