THERAPEUTIC UPDATE IN GI DISEASE

November 3-4, 2023

Symposium 235
MADRID, SPAIN

12 CME CREDITS

12 credit hours (CME) have been awarded for Symposium 235 by the European Union of Medical Specialists (UEMS).

PREFACE

Dear colleagues and friends,

It's our great pleasure and honour to invite you on behalf of the Falk Foundation, Fernando Gomollón, Rafael Bañares, Cesare Hassan, and myself to a „therapeutic update in GI disease" in Madrid later this year. While diagnosis and treatment in GI disease are rapidly evolving Madrid as the capital of Spain stands firm as a rock and will provide us with an attractive and exciting environment to discover new avenues in medical practice.

We will start Friday morning with an IBD session asking ourselves whether endoscopy, microbiota, novel drugs, or surgery has revolutionized IBD treatment. Clearly in line with these thoughts treatment of celiac disease has been revolutionized but novel diseases such as cMUSE emerge and pose new challenges.

It is our greatest pleasure to announce Professor Jan Tack introduced by Professor Markus M. Lerch as the 2023 International Herbert Falk awardee contributing to the success of the 235th Falk Foundation Symposium.

Endoscopy is an integral part of our daily clinical practice and our on calls. Focus of our meeting in Madrid will therefore be the questions when sleepless nights scoping are justified. Moreover, artificial intelligence is on the brink of reinventing endoscopy but to the benefit of the patient? When it comes to organ failure the liver moves to the center of our attention and international experts will reflect on the development, staging, and treatment of chronic liver disease.

Recently, a Spanish consortium led by Enrique de Madaria has advanced to the treatment of acute pancreatitis optimizing fluid resuscitation. We therefore felt it timely to add a session during the Falk symposium on ways reducing morbidity and mortality of acute pancreatitis.

Who would not call checkpoint inhibitors the magic bullet and a game changer in GI cancer therapy? However, it comes at a cost with respect to side effects as well as the healthcare economy. Let's engage in a discussion on how to ride the double headed dragon.

Last but not least we invite you to actively participate in our case-based discussion to together solve our most difficult cases by audience voting and a lively discussion. A Falk meeting would not be complete without your contributions. We, therefore, ask you and your junior fellows to submit abstracts for the meeting to ensure its success.

We are convinced that the outstanding international faculty we have put together and your contribution will make this meeting a memorable success and worth joining.

On behalf of the Falk Foundation, we are very much looking forward to hosting you in Madrid.

Julia Mayerle on behalf of the scientific organizers Fernando Gomollón, Rafael Bañares, and Cesare Hassan

THERAPEUTIC UPDATE IN GI DISEASE

November 3-4, 2023

Scientific Organization:
Prof. Rafael Bañares, Madrid (Spain)
Prof. Fernando Gomollón, Zaragoza (Spain)
Prof. Cesare Hassan, Milan (Italy)
Prof. Dr. Julia Mayerle, Munich (Germany)

Congress Venue:
Hotel Meliá Castilla
Calle del Poeta Joan Maragall, 43
28020 Madrid
Spain

For admission to scientific events your name badge should be clearly visible.

Accompanying persons are not permitted during the conference at any time.

Start of Registration:
Thursday, November 2, 2023
08:00 – 21:00 h
at the congress office

Friday, November 3, 2023

09:00 Welcome
Julia Mayerle, Munich

SESSION I

IBD - Treat to the target

Chairs: *Maria Esteve, Barcelona; Helga-P. Török, Munich*

09:10 Tons of new endoscopic tools: Really a new diagnostic world in IBD?
Marietta Iacucci, Cork

09:35 Tons of "microbiota" papers: Really a new way of treating IBD?
Gianluca Ianiro, Rome

10:00 A plethora of new drugs: Really a new life for IBD patients?
Charlie W. Lees, Edinburgh

10:25 Novel surgical techniques: Has surgery a future in IBD?
Monica Millan Scheiding, Valencia

10:50 **Coffee break with poster session**

SESSION II

Microscopic colitis, EoE, celiac disease, CMUSE - rare and difficult to treat patients

Chairs: *Alanna Ebigbo, Augsburg; Fernando Gomollón, Zaragoza*

11:20 Tandem talk: Eosinophilic esophagitis
Alfredo J. Lucendo, Tomelloso; Javier Molina Infante, Cáceres

11:45 Celiac disease: Just stopping gluten for treatment?
Maria Esteve, Barcelona

12:10 CMUSE: A distinct disease entity?
Helga-P. Török, Munich

INTERNATIONAL HERBERT FALK AWARD

12:35 Presentation of the International Herbert Falk Award
Markus M. Lerch, Munich

12:45 International Herbert Falk Award Lecture
Jan Tack, Leuven

13:05 **Lunch break with poster session**

SESSION III

Emergency endoscopy - when are sleepless nights justified?

Chairs: *Cesare Hassan, Milan; Marietta Iacucci, Cork*

14:05 The patient swallowed what?!? Endoscopic management of foreign bodies and food impaction
Alexander Meining, Wurzburg

14:30 Acute GI bleeding (upper and lower) – when to sleep peacefully?
Ian M. Gralnek, Haifa

14:55 Vomiting with abdominal pain and distension - the role of endoscopy in the management of acute colonic pseudo-obstruction and colonic volvulus
Antonio Capogreco, Milan

15:20 Obstructive cholangitis - ERCP for rescue!
Andrea Anderloni, Pavia

15:45 **Coffee break with poster session**

Friday, November 3, 2023

SESSION IV

Artificial intelligence in gastroenterology - facts, opportunities and pitfalls

Chairs: *Cesare Hassan, Milan; Yuichi Mori, Oslo*

16:15	Upper GI endoscopy *Alanna Ebigbo, Augsburg*
16:40	Lower GI endoscopy *Cesare Hassan, Milan*
17:05	Inflammatory bowel diseases *Marietta Iacucci, Cork*
17:30	Ethics and legal barriers in AI *Omer Ahmad, London*

Saturday, November 4, 2023

SESSION V

Chronic liver disease – how to prevent and treat complications

Chairs: *Rafael Bañares, Madrid; Christoph Roderburg, Dusseldorf*

09:00 How to evaluate the transition from simple steatosis to fibrosis? Is it worth distinguishing between the two?
Manuel Romero-Gómez, Seville

09:25 The transition from compensated to decompensated cirrhosis: Can we do something useful?
Cristina Ripoll, Jena

09:50 Is it possible to stratify decompensated cirrhosis? Is there any therapeutic implication?
Rafael Bañares, Madrid

10:15 **Coffee break with poster session**

Saturday, November 4, 2023

SESSION VI

Reducing morbidity and mortality in pancreatitis

Chairs: *Andrea Anderloni, Pavia; Alexander Meining, Wurzburg*

10:45	Time to resuscitation - the golden hour in pancreatitis *Vinciane Rebours, Paris*
11:10	ERCP and EUS – finding their place in the treatment algorithm of biliary pancreatitis *Julia Mayerle, Munich*
11:35	To feed or not to feed – still a question? *Markus M. Lerch, Munich*
12:00	Walled of pancreatic necrosis – optimizing treatment! *Marianna Arvanitaki, Brussels*
12:25	**Presentation of Poster Awards** *Rafael Bañares, Madrid; Fernando Gomollón, Zaragoza; Cesare Hassan, Milan; Julia Mayerle, Munich*
12:45	**Lunch break with poster session**

SESSION VII

Let's work together (difficult cases solved with audience voting)

Chairs: *Markus M. Lerch, Munich, Jan Tack, Leuven*

13:45 Case 1
Cesare Hassan, Milan

14:05 Case 2
Julia Mayerle, Munich

14:25 Case 3
Fernando Gomollón, Zaragoza

14:45 Case 4
Rafael Bañares, Madrid

15:05 **Coffee break with poster session**

SESSION VIII

Checkpoint inhibitors in GI cancer – to ride the double headed dragon

Chairs: *Julia Mayerle, Munich; Christoph Roderburg, Dusseldorf*

15:35 Immune checkpoint inhibitors in colorectal cancer - dream and reality
Thomas Seufferlein, Ulm

16:00 Immune checkpoint inhibitors in liver cancer
Christoph Roderburg, Dusseldorf

16:25 Immune checkpoint inhibitors in upper GI cancer
Tamara Matysiak-Budnik, Nantes

16:50 Immune checkpoint inhibitors – a double edged sword
Enrico De Toni, Munich

17:15 Farewell
Rafael Bañares, Madrid; Fernando Gomollón, Zaragoza

HERBERT FALK (1924 – 2008)

Herbert Falk was born in 1924 in Müllheim, a small town in South-West Germany between Freiburg and Basle, where his father ran a pharmacy. It was here that Herbert Falk spent his early years, attending primary school and high school up to the 5th grade. His parents then moved to Freiburg, where his father had his own pharmacy. On gaining his university entrance diploma from the Rotteck high school in March 1942, he was immediately called up for military service. During the Second World War he served on the front line in North Africa as a soldier with the Africa Corps and narrowly escaped death several times. At the end of the North Africa campaign, he was captured and transferred to the USA as a prisoner of war, spending his final year of captivity in England.

On his release and return to Germany, Herbert Falk studied pharmacy then medicine at the University of Freiburg. He graduated and received his doctor's degree in both subjects. Thereafter, he took over the pharmacy in Freiburg from his father.

After several years of success as a pharmacist, Herbert Falk made the decision which would prove so crucial for his future life's journey and founded his own company, producing and marketing pharmaceuticals for application in gastroenterological and hepatological diseases. Within a few years, his abundant energy, determined pursuit of goals, untiring diligence, keen eye for promising research developments, and not least his legendary talent for organization, had turned his pharmaceutical company into a global enterprise world famous in specialist circles. Falk products are meanwhile highly acclaimed not only in Germany and other European countries but also in South America, countries of the Near and Far East, Russia, China and Australia.

Herbert Falk's contributions to research were founded not on his own scientific work but on his organization of symposia, workshops and other scientific congresses which he sponsored and promoted to an extraordinary level and with great personal dedication. International Falk Symposia, workshops and congresses have won global recognition. There are several reasons for this:

- In addition to numerous advanced medical education programs for doctors organized by the Falk Foundation, which are primarily or exclusively concerned with issues of medical practice, the foundation also organizes symposia, workshops and congresses. These feature in-depth

lectures and critical discussions on questions and findings of biomedical basic sciences as well as their application in diagnostic measures, diagnostic decision-making, disease prevention and therapy.

- Leading researchers from a particular field and clinical-medical experts are invited to Falk Symposia as speakers or discussion leaders, enabling comparison within a field at an international level. The scientific organizers have a completely free hand in their choice of topics and selection of speakers. This gives symposia participants an opportunity to acquire first-hand knowledge of the latest findings in their field.
- Falk Symposia are the ideal opportunity for representatives of biomedical basic research, clinical research and physicians working in clinic and practice to meet and exchange opinions. Participants benefit enormously from this fertile interchange of personal experiences, critical viewpoints and valuable suggestions for further work.
- Not least, Falk Symposia are of great significance for the new medical and scientific generation in Germany, since they provide an opportunity for young doctors and scientists to encounter internationally renowned scientists from the field of gastroenterology who can answer their queries and assist their further progress by offering constructive criticism, suggestions and encouragement. A frequent outcome of these encounters is the opportunity for young German scientists to spend a lengthy period abroad as guests in the laboratories or clinical institutions of foreign researchers.

It was Herbert Falk's personality which gave the symposia their unique stamp. His generous support of organizers and speakers, intuitive flair for innovative developments, extraordinary talent for organization and overwhelming hospitality have turned Falk Symposia, workshops and congresses into scientific events of international esteem and renown.

Herbert Falk received many honors and distinctions for his outstanding achievements as a sponsor of biomedical and clinical research and patron of the upcoming medical-scientific generation. These included honorary membership of numerous national and international gastroenterological and hepatological societies. He was made an honorary doctor of the medical faculties of the Universities of Cluj-Napoca (Romania), Basle and Freiburg. The German Medical Association commended him for his services by awarding him the Ernst von Bergmann Plakette. In 2004, the American Gastroenterological Association (AGA) honored him with its highest distinction: The Lifetime Distinguished Service Award.

The portrait of Herbert Falk would not be complete without mentioning some key aspects and traits of his personality. Despite his multifaceted success in the development of his pharmaceutical company and the many honors he received, Herbert Falk remained a man of great humility in his personal dealings with the people around him. His friends and co-workers could rely on him implicitly to fulfill any decision or promise which had been made. He always had an open ear for constructive criticism. His joie de vivre and positive attitude to life remain unforgettable. Especially memorable is the pleasure he took in the culinary delights of kitchen and cellar. On such festive occasions he would strike up the "Badener Lied", the hymn to his beloved native area of Baden. The unique beauty of this countryside - so dear to him from countless hikes through the Black Forest - never ceased to fascinate him. This was where he felt at home. This was where he found the strength and inspiration he needed for his work.

Herbert Falk continued to contribute to the development of his company into a ripe old age. He kept up to date with the latest international research projects in the fields of gastroenterology and hepatology, showing a keen interest, critical discernment and sure instinct for quality. He did not give up his leading role in the company until the end of 2003, when he was nearly 80 years of age.

In 2008, a serious illness borne with admirable equanimity brought his life to an end. His memory, life's work and services will live on through the Herbert Falk Prize.

Wolfgang Gerok, Freiburg (†)

INTERNATIONAL HERBERT FALK AWARD 2023

The International Herbert Falk Award will be presented for the 5th time by the Falk Foundation e.V. on the occasion of Symposium 235 in Madrid in November 2023. The prize amounts to EUR 40.000,- and is awarded for outstanding contributions to gastroenterology, including advances in diagnosis, therapy and prevention.

MEMBERS OF THE PRIZE COMMITTEE:

M.M. Lerch, München (Germany)
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J. Schölmerich, Hofheim (Germany)
R.C. Spiller, Nottingham (Great Britain)
S. Vermeire, Leuven (Belgium)
H. Wedemeyer, Hannover (Germany)

COORDINATOR OF THE INTERNATIONAL HERBERT FALK AWARD COMMITTEE:

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REGISTRATION

You can register for the event via our homepage:
www.falkfoundation.org
Registration is only possible online.

CONGRESS FEES

Scientific Program of Symposium 235	EUR 300
Students (copy of student ID required)	EUR 150

The congress fees include:

- Pre-Opening and Welcome on Thursday, November 2, 2023
- Refreshments during coffee breaks
- Lunch on Friday, November 3 and on Saturday, November 4, 2023
- A copy of the final program

CONGRESS OFFICE AND REGISTRATION

Opening Hours:

Thursday, November 2	08:00 - 20:00 h
Friday, November 3	08:00 - 18:00 h
Saturday, November 4	08:30 - 17:30 h

ARRIVAL

Hotel Meliá Castilla
Calle del Poeta Joan Maragall, 43
28020 Madrid
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Travelling from the airport

The Hotel Meliá Castilla is located 14 km from Madrid-Barajas Airport: http://www.aeropuertomadrid-barajas.com/eng/

By taxi:

Taking a taxi to the hotel will take about 15-20 min.

By public transport:

From Madrid Airport T1-T2-T3 take tram 8 towards Nuevos Ministerios. Change here to tram 10 towards Tres Olivos. Get off at Cuzco station.

Take the Paseo Castellana Impares exit. Go north on Paseo de la Castellana towards C. de Sor Ángela de la Cruz. Turn left. Turn right towards C. del Poeta Joan Maragall. Take the stairs. Turn left towards C. del Poeta Joan Maragall. Turn right onto C. del Poeta Joan Maragall.

CONFLICTS OF INTEREST

Members of the scientific committee declare the following potential conflicts of interest:

Rafael Bañares: no potential conflict of interest to report

Fernando Gommolón: Abbvie, Dr. Falk-Pharma, Faes-Farma, Janssen, Takeda,

Cesare Hassan: Fujifilm, NEC, Olympus

Julia Mayerle: no potential conflict of interest to report

POSTER ABSTRACTS

1. Beyond eosinophilic esophagitis – Investigating the extended role of orodispersible budesonide
   H. Abdelrahim, M. Adam, H. Haboubi (Cardiff, Llanelli, GB)
2. Wheat exclusion diet versus non-wheat exclusion diets in irritable bowel syndrome
   L. Balsiger, J. Schol, K. Raymenants, K. Routhiaux, J. Scheepers, K. Van den Houte, J. Toth, L. Holvoet, B. Broeders, I. Huang, A. Verheyden, E. Ruilova Sosoranga, F. Carbone, T. Vanuytsel, J. Tack (Leuven, BE)
3. A specific microbiota signature is associated to immunotherapy-related colitis as assessed by a machine learning approach – A comparative study with inflammatory bowel diseases and healthy controls
   B. Barberio (Padova, IT)
4. An assessment of total antioxidant status (TAC) in patients with gastric cancer
   G. Biedrzycki, J. Dorf, B. Wolszczak-Biedrzycka, J. Kosidlo, K. Zareba, J. Matowicka-Karna, O. Koper-Lenkiewicz, J. Kaminska, A. Zalewska, M. Maciejczyk (Olsztyn, Bialystok, PL)
5. The role of QuantiFERON test in biological therapy treated patients
   G. Bokan, L. Mandic, T. Glamocanin, Z. Mavija (Banja Luka, BA)
6. Comparison of executive functioning profiles among adults with Crohn's disease and ulcerative colitis
   E. Broide (Be'er Ja'akow, IL)
7. Difficult to swallow: The one-stop dysphagia clinic
   J. Carter, P. Marden, T. Thresher, B. Colleypriest (Bath, GB)
8. MAFLD, cytokeratins, Golgi protein 73 and microRNAs – A new pathway in hepatology?
   H. Cichoz-Lach, A. Michalak, M. Guz, J. Kozicka, M. Cybulski, W. Jeleniewicz, A. Stepulak, B. Kasztelan-Szczerbinska, A. Rycyk-Bojarzynska (Lublin, PL)
9. Immunophenotype of CD4/CD138/Btk cells in endoscopic tissue material from patients with inflammatory bowel diseases
   J. Cylwik, K. Jakubowska, K. Lomperta, M. Koda, A. Pankiewicz, D. Lasota, I. Backiel, L. Kanczuga-Koda (Bialystok, PL)
10. Evaluation of ongoing program on elimination HCV infection in Mongolia
    T. Dagvadorj, B. Dashtseren, N. Dashdorj, Y. Dahgwahdorj (Ulaanbaatar, MN)
11. Results of direct-acting antiviral therapy in patients with HCV infection and B-cell non-Hodgkin lymphoma
    Y. Dahgwahdorj, M. Budeebazar, D. Duger, K. Batsukh, N. Dashdorj (Ulaanbaatar, MN)
12. Metabolic syndrome and colorectal adenomas: A cross-sectional study
    D. Damjanov, Z. Savic, T. Jocic, O. Latinovic Bosnjak, Z. Krnetic, N. Janjic (Novi Sad, RS)
13. Osteoporosis – A frequent extraintestinal manifestation in celiac disease
    C. Deliu, V. Popescu, D. Neagoe, A. Genunche, O. Chirea (Bals, Craiova, RO)
14. Prevalence of iron deficiency in patients with colorectal cancer and ulcerative colitis
    C. Deliu, V. Popescu, A. Genunche, D. Neagoe, O. Chirea (Bals, Craiova, RO)
15. Incidence of Helicobacter pylori-positive gastritis in newly diagnosed inflammatory bowel disease patients
    S. Dragasevic, T. Vukosavljevic, S. Djuranovic, A. Nikolic, A. Toplicanin, S. Vuksanovic, S. Rajic, J. Spiric, M. Stojkovic Lalosevic, D. Popovic (Belgrade, RS)

16. Inflammatory bowel disease and the place of N-acetyltransferase 2 polymorphism (NAT2)
R. Dudkowiak, P. Petryszyn, G. Zurakowski, G. Szkopek, M. Machowska, A. Gruca, P. Ekk-Cierniakowski, J. Skretkowicz, A. Wiela-Hojenska (Wroclaw, Warsaw, Lodz, PL)

17. Parents's perception of their children's inflammatory bowel disease
A. Eindor, E. Broide (Raanana, Zriffin, IL)

18. Assessment of serum neuropilin 1 as a single serum marker for HCC in cirrhotics
M. Elkady, H. Ragheb, A. Afifi (Benha, EG)

19. Spontaneous bacterial peritonitis – The role procalcitonin in differentiation between classically SBP and neutrocytic ascites in patients with liver cirrhosis
M. Elkady, H. Eleraky, Y. Ismael, A. Sabaa (Benha, Cairo, EG)

20. Immune-mediated colitis (IMC) and inflammatory bowel disease (IBD) – How big is the overlap?
D. Feijo, S. Lopes, S. Mendes, F. Portela, P. Figueiredo (Coimbra, PT)

21. Particularities of the long-term treatment of non-alcoholic steatohepatitis in obese patients
A. Genunche-Dumitrescu, C. Neagoe, C. Badea, M. Badea, R. Surugiu, A. Badea (Craiova, Bucharest, RO)

22. Role of association between gluten-free diet and therapy in inducing and maintenance remission in patients with celiac disease in autoimmune hepatitis
A. Genunche-Dumitrescu, C. Badea, C. Neagoe, M. Badea, R. Surugiu, A. Badea (Craiova, Bucharest, RO)

23. Geographic distribution in IBD patients in Romania – A multicenter-based study
A. Goldis, C. Gheorghe, L. Gheorghe, M. Tantau, C. Cijevschi, A. Trifan, D. Dobru, C. Goldis, M. Diculescu (Timisoara, Bucharest, Cluj Napoca, Iasi, Targu Mures, RO)

24. The diagnostic value of hepatocyte paraffin antibody 1 in differentiating hepatocellular carcinoma from non-hepatic tumors
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1. Beyond eosinophilic esophagitis – Investigating the extended role of orodispersible budesonide

Hamza Abdelrahim (Cardiff, GB), Mohamed Adam (Llanelli, GB), Hassan Haboubi (Cardiff, GB)

Introduction: Orodispersible Budesonide (ODB) has become the mainstay of treatment for patients with Eosinophilic Esophagitis (EoE), both as part of induction remission as well as in maintenance therapy. Budesonide is a non-halogenated glucocorticosteroid, which acts primarily as an anti-inflammatory via binding to the glucocorticoid receptor. It works through inhibition of many pro-inflammatory signal molecules such as thymic stromal lymphopoietin, interleukin-13 and eotaxin-3 in the esophageal epithelium, which results in a significant reduction of the esophageal eosinophilic inflammatory infiltrate.

It also has anti-fibrotic properties, which allow for resolution of some of the stricturing associated with EoE.

ODB is only licensed in the management of EoE, but we postulate that it's use can be extended outside of this role to other inflammatory disorders of the esophagus.

Methods: We describe two cases of off-license use of OBD in the management of esophageal disease and document their clinical, endoscopic, and histologic improvement.

Results: The first case is of a 57-year-old woman who presented with Esophagitis Dissecans Superficialis (EDS) with a complex pan-esophageal stricture which was being managed with esophageal balloon dilatation procedures, PPI therapy, as well as triamcinolone injections. All potential culprit medications had been stopped, and all blood tests, including coeliac serology and autoantibody screen were negative. The second case is of a 63-year-old man with a T1a Barrett's intramucosal adeno-carcinoma which was removed by endoscopic resection followed by treatment with radiofrequency ablation (RFA). He had a complex stricture in his lower esophagus which did not respond to high dose anti-acid medication, 2-weekly dilatations, and even recurred following insertion and subsequent removal of a fully-covered esophageal stent.

Both patients were treated with ODB 1 mg twice daily for 12-weeks. At 12-weeks, both patients showed complete resolution of their strictures, and dietary normalization. Maintenance therapy was continued in the first patient long term, and in the second case was continued whilst completing his endoscopic ablation therapy, then successfully weaned. Neither patient has had recurrence of stricturing after 1-year of follow-up.

Discussion/Conclusion: We describe two cases of dysphagia and complex esophageal structuring – one due to EDS, and the second iatrogenically induced following Barrett's esophagus eradication therapy. Both cases were refractory to conventional stricture management but resolved following a 12-week course of ODB. We therefore believe that there is an extended use of ODB outside of EoE where it's anti-fibrotic properties can be utilized. Further research is needed to validate and build on this experience.

2. Wheat exclusion diet versus non-wheat exclusion diets in irritable bowel syndrome

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Introduction: Irritable bowel syndrome (IBS) is a disorder characterized by abdominal pain related to bowel habits. A diet low in fermentable oligo- di- monosaccharides and polyols (FODMAPs) has shown efficacy in IBS. Wheat is a major source of the FODMAP group fructans in the westernized diet and contains proteins such as gluten which may trigger immune responses. Thus, wheat may contribute to symptoms both through FODMAPs and through local allergic reactions.

Methods: Non-constipated IBS patients underwent confocal laser endomicroscopy (CLE) to identify food-related reactions suggestive of local allergic reactions, followed by a 4-weeks double-blind crossover intervention excluding the trigger nutrient or control nutrient respectively. Here, outcomes irrespective of CLE results are reported: symptom evolution in periods excluding wheat (alone or in combination) were compared with periods excluding nutrients other than wheat (egg, soy, milk, fish, nuts or any combination of two of these). Response was defined as IBS-SSS decrease of ≥ 50 points and compared using Fisher's exact test, continuous variables were compared using t-tests. A p value of ≤ 0.05 was considered significant.

Results: Data from 13 patients undergoing a total of 18 individual dietary periods was available. Response rate in wheat excluding diets was 71% vs. 54% in other diets but this was not statistically significant (OR = 2.0, 95% CI: 0.2–29.9, p = 0.64). Mean symptom improvement on a wheat excluding diet was numerically but not statistically greater (77 3 45 points vs. 41 3 30 points, p = 0.5). There was no difference in improvement of pain and bloating between diets (13 3 14 vs. 12 3 6, p = 0.94 and 7 3 14 vs. 16 3 10, p = 0.64, respectively)

Conclusion: Response rates on wheat excluding diets were higher than on diets not excluding wheat, albeit not statistically significant at the current sample size – more data is needed to examine the effect of a wheat-free diet on IBS symptoms.

3. A specific microbiota signature is associated to immuno-therapy-related colitis as assessed by a machine learning approach – A comparative study with inflammatory bowel diseases and healthy controls

Brigida Barberio (Padova, IT)

Introduction: Immuno-mediated colitis is one of the most common gastrointestinal side effects associated with immune checkpoint inhibitors (ICIs). ICIs-colitis shares with inflammatory bowel disease (IBD), including both Crohn's disease (CD) and ulcerative colitis (UC), the clinical presentation, macroscopic, microscopic, and serological findings, making challenging the differentiation between the two conditions. The gut microbiota has been suggested as an important driver in the pathogenesis of ICIs-colitis as well as in the pathogenesis of IBD. We aimed to assess whether a specific microbiota profile, as measured by a machine learning approach, can be associated with ICIs-colitis and whether it differs from the one assessed in patients with IBD and in healthy controls (HCs).

Methods: In this prospective pilot study, consecutive patients with ICIs-colitis, patients with IBD and HCs were enrolled. Stool samples were collected for fecal microbiota assessment analysis by 16S rRNA gene sequencing approach. The raw reads underwent a filtering procedure performed within QIIME2 analysis framework (version 2022.8). Alpha diversity was evaluated on rarefied counts (Richness, Shannon, and Pielou indices; rarefaction level: 31,556), while beta diversity was calculated on normalized counts (Bray-Curtis, Jaccard, Canberra, Weighted and Unweighted Unifrac; counts normalized with GMPR). The diversity analysis was conducted in R (version 4.1.0). A permutational analysis of variance (PERMANOVA) test on Bay-Curtis dissimilarity was used to test for differences in the microbiota composition between disease status groups (vegan and ecole packages). The MaAsLin2 package was then used to perform differential abundance analysis at all taxonomic levels. Supervised and unsupervised machine learning algorithms were applied.

Results: Nineteen patients with ICIs-colitis, 40 patients with UC (20 active and 20 inactive), 34 with CD (14 active and 20 inactive) and 36 HC were enrolled. Alpha diversity was not significantly different between ICIs-colitis and HCs ($p = 0.94$), while it was statistically significant between IBD and HCs ($p = 0.02$) and between IBD and ICIs-colitis ($p = 0.03$). At phylum levels, we found high levels of Tenericutes in HCs and high levels of Proteobacteria in ICIs-colitis. Moreover, we found high levels of Actinobacteria in IBD compared to the other group. Interestingly, at genus levels, we found very high levels of Enhydrobacters in ICIs-colitis compared to patients with IBD. While at species levels, high levels of Bifidobacterium longum in patients with UC were observed. A specific microbiota profile was found for each group (IBD, ICIs, HC) and was confirmed with sparse partial least squares discriminant analysis, a machine learning-supervised approach. The latter allowed us to observe a perfect class prediction and group separation using the complete information (full Operational Taxonomic Unit table), with a minimal loss in performance when using only 5% of features.

Discussion/Conclusion: A machine learning approach to 16S rRNA data identifies a bacterial signature characterizing ICIs-colitis from IBD and HCs. Future researches will clarify whether such microbiota profiling is useful for prediction, early diagnosis and management of patients with ICIs-colitis.

4. An assessment of total antioxidant status (TAC) in patients with gastric cancer

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Introduction: Gastric cancer is the 7th most common cancer in Poland. Many reports also indicate the role of ROS and oxidative stress in carcinogenesis process. Oxidative stress contributes to the denaturation of tissue proteins, DNA damage and lipid peroxidation, and interferes with normal metabolic activity, thereby inducing the occurrence or development of cancer. There are many mechanisms in the body to protect against the effects of ROS. This is called antioxidant protective system.

Methods: The aim of this study was to assess the total antioxidant status (TAC) in patients with cancer, to compare the TAC status in the plasma of healthy and gastric cancer people, to assess the relationship between TAC and selected clinical and pathological parameters and the results of selected laboratory tests. The research was conducted on a group of 49 people. The determinations were carried out using the colorimetric method using 2,2'-azobis diammonium salt (3-ethylbenzothiazoline-6-sulfonate (ABTSS- +).

Results: The obtained results showed that the concentration of TAC is significantly lower in patients treated for gastric cancer compared to the plasma of healthy people ($p < 0.0001$). Differences in TAC levels were also observed depending on the degree of malignancy of G2 and G3 tumors ($p = 0.0456$), depth of tumor infiltration ($p = 0.0417$), pN ($p = 0.0043$), APTT ($p = 0.0461$), creatinine level ($p = 0.0379$), CEA level ($p = 0.0159$) and CA 19-9 ($p = 0.0051$). Moreover, based on the analysis of the ROC curves, the diagnostic utility of TAC in patients with gastric cancer (AUC = 1, $p < 0.0001$) was found.

Discussion/Conclusion: The performed research will enable a more in-depth exploration of the role of the antioxidant defense system and ROS in cancer development. In the future, it may allow a more detailed understanding of the mechanisms responsible for the occurrence and progression of gastric cancer.

5. The role of QuantiFERON test in biological therapy treated patients

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Introduction: Biological drugs are the standard therapies for the inflammatory bowel disease (IBD) worldwide.

In our health institution, the biological therapy was introduced in September 2014.

The aim of this study is to determine the frequency of QuantiFERON test positivity and its significance in IBD patients treated with the biological drugs.

Methods: A single-center study conducted at the University Clinical Center of the Republic of Srpska, Banja Luka, from June 2016 to June 2022. Data from the medical history of 117 patients and their medical documentation from the clinical information system were analyzed.

Results: The QuantiFERON positive test had 33 patients (28.2%), of which 15 patients (45.4%) before the introducing of the biological drug. There were 38.46% adalimumab treated patients, while 53.83% of QuantiFERON positive patients. Prophylactic therapy (during from 2 to 6 months) was performed in 21 patients (63.6%). There was no statistical significance between adalimumab treated patients with other biological drugs and test positivity ($p > 0.05$).

Discussion/Conclusion: We did not record any significant clinical manifestations of disease in QuantiFERON positive patients and during that period no significant cases of IBD exacerbation were recorded.

6. Comparison of executive functioning profiles among adults with Crohn's disease and ulcerative colitis

Efrat Broide (Be'er Ja'akow, IL)

Introduction: Psychological factors that influence inflammatory bowel disease (IBD) outcome can impact patients' ability to cope and aid the management of the disease. Executive functions (EFs) are cognitive processes, which enable the achievement of selected goals and overcoming new challenges. The role of EFs in the management of IBD is still not fully understood.

We assess the EFs in IBD patients and compare EFs between patients with Crohn's disease (CD) and ulcerative colitis (UC).

Methods: An anonymous online survey, including demographic, clinical data and the validated self-report BRIEF-A questionnaire, was sent to adult IBD patients. BRIEF-A score

above 65 is considered an impaired EF. Logistic regression was used to study the association between disease type (UC vs CD) and suspected EF deficits, while controlling for potential cofounders by use of a propensity score.

Results: 148 IBD patients (34% UC) with mean age of 31.5 years old (50% females) were included. BRIEF-A scale and index scores were within the normal range (< 65). Most of the scores were significantly better in CD than UC patients: shift (57.9 vs. 52.7, p = 0.015), monitor (50.54 vs. 46.24, p = 0.029), working memory (57.83 vs. 52.18, p = 0.03), plan (54.97 vs. 49.2, p = 0.005), organization of materials (52.95 vs. 48.98, p = 0.019). CD patients had a better Global Executive Composite (59.27 vs. 53.7, p = 0.008).

Discussion/Conclusion: IBD patients in the study had normal EF profiles assessed by the BRIEF-A questionnaire. However, UC and CD patients presented different executive profiles. Understanding these differences can enable interventions that may improve patient's quality of life.

7. Difficult to swallow: The one-stop dysphagia clinic

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Introduction: Dysphagia makes up a large proportion of direct-to-test referrals for gastroscopy. Endoscopy is performed on many with oropharyngeal phase swallowing difficulties, unlikely to have significant findings. To avoid un-necessary procedures and provide in-depth clinical advice we use a targeted clinical discussion with risk stratification to decide on the need for endoscopy.

Methods: Patients attend having fasted for 6 hours. A brief consultation, incorporating the Cancer Dysphagia Score (CDS), is performed to stratify risk. Patients then proceed immediately to Nasal-OGD, are referred for other relevant investigations, or are discharged without investigation.

Results: In the first 6 months 101 patients attended the clinic (age 22–95, average: 66). 81 received same-appointment OGD, 9 a barium swallow, 3 were booked for OGD with sedation, and 8 did not undergo any investigation. The most common diagnoses were non-erosive GORD (27.7%), oropharyngeal dysphagia (18.9%), erosive GORD (10.9%) and upper-gastrointestinal cancer (7.9%). Eosinophilic oesophagitis was identified in 2%.

30 patients had a CDS < 5.5 (sensitivity of 97.8 (92.3–99.7)% and NPV of 99.5 (98.1–99.9)% for UGI cancer). 19 patients with CDS < 5.5 identified swallowing difficulty at the level of their neck, and none of those investigated (n = 14) had any endoscopic findings. Some patients had alternative indication for endoscopy and some chose to have investigation for reassurance.

No patient who did not have an OGD went on to have a diagnosis of significant upper-GI pathology.

Discussion/Conclusion: This model of care avoided un-necessary endoscopy in 16.8% of referrals and appears to be safe. Using CDS < 5.5 as the only criteria for triage 29.7% of endoscopies could be avoided. Incorporation of a dysphagia questionnaire into primary care referrals could facilitate referral for the most relevant test and reduce pressure on overstretched endoscopy services. Alternatively, a one-stop clinic can be used to target endoscopy appropriately.

8. MAFLD, cytokeratins, Golgi protein 73 and microRNAs – A new pathway in hepatology?

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Introduction: The aim of our study was to assess the diagnostic value of cytokeratins (CCK18 and K18) and Golgi protein 73 (GP73), including relationships between them and selected serological markers of liver fibrosis together with microRNAs (miRNAs), in patients with metabolic-associated fatty liver disease (MAFLD).

Methods: 196 people were qualified for the study: 96 – with MAFLD and 100 healthy volunteers. Serological expressions of CCK18 and K18, GP73, carboxyterminal procollagen I propeptide (PICP), aminoterminal procollagen III propeptide (PIIINP), platelet-derived growth factor AB (PDGF-AB), transforming growth factor-α (TGF-α), laminin, miR-126 -3p, miR-197-3p and miR-1-3p were assessed in all subjects. The following parameters were also measured: AAR, APRI, FIB-4 and GPR.

Results: CCK18 and K18 levels were significantly higher in MAFLD group compared to controls ($p < 0.0001$). In addition, patients with MAFLD and BARD score ≥ 2 presented significantly higher GP73 values compared to those with BARD < 2 ($p < 0.001$). K18 correlated in positive manner with: PICP and miR-126-3p ($p < 0.05$). The AUC and cut-off values for CCK18, K18 and GP73 in the MAFLD group were: 0.780, > 74.56 U/l, $p < 0.001$; 0.764, > 64.13 U/l, $p < 0.001$ and 0.767, > 323.32 ng/ml, $p < 0.001$, respectively.

Discussion/Conclusion: Presented new relationships between CCK18, K18, GP73, miRNAs and direct markers of liver fibrosis may be considered as a potential new diagnostic option for MAFLD and the assessment of its progression. Maybe after further investigations, these markers could even become a therapeutic target in MAFLD patients.

9. Immunophenotype of CD4/CD138/Btk cells in endoscopic tissue material from patients with inflammatory bowel diseases

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Introduction: In untreated inflammatory bowel disease (IBD), the inflammatory infiltrate is confined to the mucosa and is diffuse and continuous without variation in intensity or lesion skipping. Plasma cells (CD138+) are predominantly observed between the base of the crypts and the muscularis mucosae where they arise from the activation of B lymphocytes (Btk+ cells) in the lymph nodes. B cells come into contact with Th lymphocytes (CD4+), resulting in the formation of the germinal center of the lymphoid follicle. Therefore, the aim of the present study is to analyze the insensitivity infiltration of CD4/CD138/Btk phenotype cells in endoscopic material from patients with ulcerative colitis (UC) and Crohn's disease (CD) patients.

Methods: The study group consists of 34 patients with ulcerative colitis and 8 patients diagnosed with Crohn's disease. The activity of diseases were examined according to Geboes score in UC and to Brennan classification in CD. Expression of CD4, CD138 and Btk protein were performed by immunohistochemistry and assessed in membrano-cytoplasmic color reaction classified into 1- weak, 2- moderate and 3- strong in lamina propria. CD4/CD138/Btk phenotype cells were dived into 4 group: CD4-/CD138+/Btk+, CD4-/CD138+/Btk-, CD4+/CD138+/Btk+ and CD4+/CD138+/Btk-.

Results: The study group consists of 16 women and 18 men in UC, and 2 female and 6 male of CD. The UC lesions were mainly located in the rectum (19/34 cases), sigmoid (8/34cases) and other areas (7/34 cases). Crohn's disease was observed in the small intestine (3/8 cases), caecum (4/8 cases) and rectum (1/8 cases). The immunophenotype of CD4-/CD138+/Btk+ cells in UC slides was found to correlate with inflammation of Th lymphocytes (CD4+) (R = -0.384) and plasma cells (CD138+) (R = -0.426). Patients with CD4+/CD138+/Btk+ were associated with age (R = 0.462). In patients with CD, the specific phenotype cells correlated with neutrophils in the lamina propria (R = -0.881), BTk+ cells in the inflammatory infiltrate (R = 0.930) and the presence of crypt destruction (R = 0.724).

Discussion/Conclusion: Our study showed that CD4/CD138/Btk cells may have an impact on inflammatory cell organization and architectural changes in inflammatory bowel disease and warrant further detailed investigations.

10. Evaluation of ongoing program on elimination HCV infection in Mongolia

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Introduction: There is well known, Mongolia is endemic for viral hepatitis (VH) infection. Therefore, it is conducting much measurement against VH by Mongolian Government. One of them is discounted or free DAA drugs (access program) for patients with HCV, since 2017 ("Whole liver-Mongolia"). Currently, WHO approved the Global Health Sector Strategy to eliminate viral hepatitis by 2030.

Methods: Aim of study: To evaluate the ongoing program on elimination HCV infection in Mongolia. Method and materials: Mathematic modeling of the data our study on prevalence of HCV infection in Mongolia in 2003 and 2013 (2, 3) and DAA drugs treatment results in Mongolia since 2017.

Results: By the prevalence study calculated, in 2003 there were 252000 people and after 10 years, in 2013 were 133000 people with HCV infection in Mongolia (1, 2, 3, 4, 5). The prevalence of HCV infection increased with age. The quantity treated patients with HCV infection by DAA drugs, officially by Health insurance authority's data more than 40,000, but by the pharmaceutical supplier's data around 90,000 person/full course dose: The efficacy of DAA treatment was 97.4–99.4% (6).

Discussion/Conclusion: The prevalence of HCV is steadily decreasing. Due to it, infectivity and transmission rate followed decreasing. Spatial, temporal and other multi factors including spontaneous recovery and mortality of older peoples influence to drop from total numbers of infected people. On basis of these data sets, it is calculated, nowadays in Mongolia living around less than 50 000 people with active HCV infection.

If a measurement against HCV infection continues as before, the goal of elimination program on HCV infection in Mongolia achievable in time.

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11. Results of direct-acting antiviral therapy in patients with HCV infection and B-cell non-Hodgkin lymphoma

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Introduction: Direct-acting antiviral (DAA) therapies have been revolutionizing the HCV treatment and a number of studies worldwide were published about the potential results of its combination with chemotherapy in B-cell non-Hodgkin lymphoma (B-NHL) patients**.**

Objectives: to assess the treatment outcome of administering DAA therapy in patients with HCV who also developed B-NHL.

Methods: Design of study was prospective cohort. There were observed 25 patients with chronic HCV infection and also newly diagnosed with B-NHL, from June 2017 to June 2019. Eleven of them administered DAA drugs before chemotherapy. Fourteen of them administered only chemotherapy and compared with DAA administered group.

Results: The average peak alanine aminotransferase (ALT) level was found significantly high (116.4 and 23.7; p = 0.002) in the group that directly started the chemotherapy compared to the other group who received the DAA before chemotherapy. All of the DAAs received patients could successfully finish their treatment as planned, while for two patients in the direct chemotherapy group, the elevated ALT level induced the hepatitis flare during 2–3 cycles of chemotherapy, thus terminated the chemotherapy. In newly diagnosed B-NHL patients with chronic HCV, 90.9% out of those were clinically stable or improved during the DAA therapy.

Discussion/Conclusion: Administrating the DAA therapy in chronic HCV infected patients resulted in significant clinical benefits. For those newly diagnosed with indolent B-NHL receive it before chemotherapy, while those who have a highly aggressive form of B-NHL concurrent with chemotherapy is suggested.

Keywords: hepatitis C virus, hepatitis flare, non-Hodgkin's lymphoma, prevalence

12. Metabolic syndrome and colorectal adenomas: A cross-sectional study

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Introduction: The majority of CRC cases arise from colorectal adenomas (CRAs). Since the majority of sporadic CRAs slowly progress to CRC, there is a great opportunity for CRC prevention by detecting and treating CRAs on time. There is evidence that patients with metabolic syndrome (MetS) tend to have larger adenomas, multiple adenomas, adenomas in multiple colon segments and with advanced histopathology. In this study, we aimed to investigate the characteristics and distribution of CRAs in patients with MetS.

Methods: This cross-sectional study included 80 consecutive patients with CRA, aged 40–75 years, of which 40 patients had MetS and 40 patients did not fulfil enough criteria for MetS (control group). The diagnosis of MetS was made if 3 or more criteria of the following were present: 1) increased waist circumference (≥ 94 cm in men or ≥ 80 cm in women); 2) hypertriglyceridemia (≥ 1.7 mmol/l); 3) hypo HDL-cholesterolaemia (< 1.0 mmol/l in men or < 1.3 mmol/l in women); 4) arterial hypertension (systolic blood pressure (BP) ≥ 130 mmHg and/or diastolic BP ≥ 85 mmHg); 5) fasting hyperglycemia (≥ 5.6 mmol/l).

Results: The average age of the patients was 60.76 years. Men and women were equally present in both groups, as were all the common risk factors for CRA. Most adenomas were ≥ 10 mm in size. In most cases, only one adenoma was detected in the colon. The minority of patients had adenomas in both the proximal and distal colon. More than two thirds of adenomas were advanced. There were no differences between the groups in regards to adenoma size, number of detected adenomas, localisation of adenomas, and histological findings of advanced adenoma.

Discussion/Conclusion: There were no significant correlations in the presence of MetS and characteristics and distribution of CRAs in our study. To our knowledge, this was the first study to investigate correlations between MetS and CRA in our region.

13. Osteoporosis – A frequent extraintestinal manifestation in celiac disease

Cristina Deliu (Bals, RO), Veronica Popescu (Bals, RO), Daniela Neagoe (Craiova, RO), Amelia Genunche (Craiova, RO), Oana Chirea (Craiova, RO)

Introduction: Celiac disease is a common disorder with a broad spectrum of symptoms, underdiagnosed, in part owing to the fact that is often characterized by associated conditions and extraintestinal manifestations that can misdirect and impede diagnosis. In some cases, extraintestinal symptoms are the only clinical manifestations of celiac disease, osteoporosis being one of them. The study aimed to evaluate bone mineral density and analyze the clinical characteristics of patients diagnosed with celiac disease.

Methods: The study analyzed 74 patients (including 28 men and 46 women) diagnosed with celiac disease, having bone mineral density measured by dual energy X-ray absorptionmetry who had completed a questionnaire. The average age was 54 3 9 years (range, 23–75 years).

Results: The disease occurred mainly in the age group of 29–54 years. The median course of the disease was 2.0 (0.2–40.0) years. There were 36 (48.6%) classical and 38 (51.4%) non-classical CD patients. All patients with classical CD showed chronic diarrhea, often accompanied by chronic fatigue (47.2%, 17/36), abdominal pain (47.2%, 17/36), abdominal distension (27.7%,10/36), and anemia (63.8%, 23/36). The main manifestations of non-classical CD were chronic abdominal pain (57.8%, 22/38), abdominal distension (36.8%, 14/38) anemia (65.7%, 25/38) and osteoporosis (39.4%, 19/38). We analyzed osteoporosis at the patients with non-classical celiac disease and the results were: osteoporosis (T score < -2.5) was present in 36.8% of the patients at the lumbar spine, 23.6% at the femoral neck, and 39.4% at the radius; low bone mass (T score between -1.0 and -2.5) was present in 36.8% at the lumbar spine, 47.3% at the femoral neck, and 34.2% at the radius

Discussion/Conclusion: Routine screening for osteoporosis is indicated in patients with celiac disease. Based on DXA analysis of patients with celiac disease, the prevalence of osteoporosis appears to be underestimated, men were more severely affected than women.

14. Prevalence of iron deficiency in patients with colorectal cancer and ulcerative colitis

Cristina Deliu (Bals, RO), Veronica Popescu (Bals, RO), Amelia Genunche (Craiova, RO), Daniela Neagoe (Craiova, RO), Oana Chirea (Craiova, RO)

Introduction: The increased risk of colorectal cancer in ulcerative colitis is well known. This study represents an analysis of patients diagnosed with colorectal cancer and ulcerative colitis associated with low systemic iron levels.

Methods: We performed a retrospective study of 89 patients who were diagnosed with colorectal carcinoma and ulcerative colitis from 2020–2022. We reviewed the discharge charts and recorded the following data: gender, age, tumor size, tumor site, tumor stage, clinical symptoms, complete blood counts, serum iron, total iron binding capacity. Iron status was confirmed by measurement of serum ferritin concentration and transferrin saturation.

Results: A total of 89 patients, with a mean age of 68.7 years, were enrolled; 46 patients were male. Their mean hemoglobin was 11.4 g/dl. 47 patients (52.8%) were found to have anemia. Multivariate logistic regression analysis showed that female gender, tumor in the right colon (cecum, ascending colon, hepatic flexure), and maximum tumor diameter > 4 cm were risk factors of anemia in patients with colon carcinoma. Serum ferritin had been measured in 64 patients, and low ferritin level (< 40 micro/l) was found in 41 (64%) of them. Among the 49 patients with ascending localization, 39 (80%) had iron deficiency. Iron deficiency was significantly higher in patients with the ascendant compared with those with cancer distal to the splenic flexure.

Discussion/Conclusion: Most patients diagnosed with colorectal cancer and ulcerative colitis have iron deficiency throughout the disease. In such patients, measurement of transferrin saturation is a more sensitive marker of iron deficiency than serum ferritin.

15. Incidence of Helicobacter pylori-positive gastritis in newly diagnosed inflammatory bowel disease patients

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Introduction: Aberrant immune responses to the components of gut microbiota in a genetically susceptible host due to interactions with environmental factors result in a disruption of intestinal homeostasis, chronic inflammation, and the onset of inflammatory bowel disease (IBD). Previous research has shown a potentially protective effect of chronic Helicobacter pylori infection in the development of IBD. The aim of our study was to determine incidence of H. pylori-positive gastritis in newly diagnosed IBD patients compared with the control group.

Methods: A cross-sectional study was performed at the Clinic for Gastroentero-hepatology, University Clinical Center of Serbia that included 104 newly diagnosed IBD patients and 100 controls. Study patients were not on proton-pump inhibitor therapy for a minimum of 2 weeks before the endoscopic examination. Endovideo-esophagogastroduodenoscopy with biopsy sampling of gastric mucosa was performed on all subjects included in the study in order to assess the extent of Crohn's disease, investigate dyspepsia in patients with ulcerative colitis and in the control group. Histopathological analysis of gastric mucosa biopsies determined the presence of H. pylori-positive gastritis.

Results: Significantly higher frequency of H. pylori-positive gastritis was registered in the control group compared to IBD patients ($p = 0.000086$). There was no correlation between H. pylori-positive gastritis and previous use of H. pylori eradication therapy or smoking status in both of groups.

Discussion/Conclusion: Results of our research found significantly higher frequency of H. pylori-positive gastritis in the control group compared to IBD patients. Although current epidemiological data indicate an inverse correlation between H. pylori infection and the risk of IBD, more experimental evidence is needed on the potentially protective role of H. pylori in the development of IBD.

16. Inflammatory bowel disease and the place of N-acetyltrans-ferase 2 polymorphism (NAT2)

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Introduction: Enzymes from the group of N-acetyltransferases catalyse reaction of attaching acetyl radicals (derived from acetyl-CoA) to substrates containing the NH group, in particular aromatic amines and hydrazines. This process leads to the detoxification of compounds/xenobiotics potentially harmful to the body (carcinogens and medications). In humans, these reactions are catalysed by two N-acetyltransferases, type 1, and type 2, encoded by the NAT1 and NAT2 genes, respectively.

The enzyme N-acetyltransferase 2 (NAT2) has a more limited expression profile than NAT1 – mainly in the liver, small intestine and colon, and does show a greater affinity to sulfamethazine, isoniazid, procainamide and dapsone.

We aimed to assess the contribution of the NAT2 polymorphism to susceptibility to inflammatory bowel disease (IBD) in the Polish population.

Methods: The study involved 101 IBD patients (50 with ulcerative colitis [UC], 51 with Crohn's disease [CD]) and 100 healthy controls (HC; 41 males, 59 females). The diagnoses of CD and UC were performed based on endoscopic, radiological, and/or histopathological examinations in compliance with established clinical guidelines and criteria of IBD.

The NAT2 gene mutations at positions 481T, 803G, 590A, and 857A were identified using the polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) technique on peripheral blood DNA samples.

Results: Carriers of the NAT2*5 allele had a greater chance of developing CD (OR = 1.73, 95% CI: 1.06–2.83). Also, the NAT2*4/5 genotype was more prevalent in CD patients (OR = 2.77, 95% CI: 1.17–6.57). When compared to the HC group, the prevalence of the NAT2*4/6 genotype in the IBD patient population was significantly lower (10.9% vs. 30.0%, $p < 0.01$).

Discussion/Conclusion: Polymorphism in the NAT2 gene may potentially alter susceptibility to inflammatory bowel disease. More study in this field are needed in relation to the use in pharmacology as well as in the diagnosis of IBD.

17. Parents's perception of their children's inflammatory bowel disease

Adi Eindor (Raanana, IL), Efrat Broide (Zriffin, IL)

Introduction: Although Inflammatory bowel disease (IBD) can be diagnosed at any age, 25% of patients are diagnosed during childhood. The disease burden influence not only the pediatric IBD patients, but also their parents. There is growing evidence of parental distress and negative influence on quality of life, but no study to date investigated parent's perception on the treatment and management of their children's disease.

We aim to investigate what bothers parents to children with IBD, and their willingness that their child will participate in a clinical study.

Methods: We advertised an anonymous questionnaire via social media and invited Israeli parents of pediatric IBD patients to participate in the study. The study was approved by the ethics committee of the Shamir medical Centre.

Results: There were 86 parents who answered the questionnaire. Median age was 46, and 87% were female. Median age of the child at diagnosis was 12, and 62.8% of the children had Crohn's disease. All parents reported they trust their child's physician, and that the communication with the medical staff is either good or very good, however, 19.8% of the parents reported their child's health condition is bad. Most parents reported they are very concerned of their child's symptoms, and that their child's growth will be affected from the disease (53.5%). However, more parents (82.6%) reported they are concerned about future side effects from their child's medications. Most parents reported they refuse their children will participate in a study investigating new medication for IBD (52.3%), however, the vast majority of parents (86%) agreed their child will participate in a study about nutritional therapies in IBD.

Discussion/Conclusion: More parents of IBD patients are concerned about the side effects from the IBD medications, than from the effects of the disease itself. Physicians should address these concerns during the medical encounters.

18. Assessment of serum neuropilin 1 as a single serum marker for HCC in cirrhotics

Mostafa Elkady (Benha, EG), Hany Ragheb (Benha, EG), Ahmed Afifi (Benha, EG)

Introduction: (HCC) is a global health problem. It is the second most common cause of cancer-related mortality and the sixth most common cause of cancer worldwide, risk factors for HCC include chronic viral hepatitis, alcoholic and non-alcoholic fatty liver disorders and other forms of chronic hepatitis. The aim: to study the clinical usefulness of serum neuropilin 1 (NRP 1) as a diagnostic marker for HCC.

Methods: This cross-sectional study was conducted on 90 individuals divided into three groups: Group I: Thirty patients with HCC, Group II: Thirty patients with liver cirrhosis (LC), Group III: Thirty apparently healthy subjects. All patients were subjected to full medical history taking, thorough clinical examination and determination of the serum level of NRP 1.

Results: NRP1 level was significantly higher in HCC when compared to LC group. Also, NRP 1 level was significantly higher in HCC and LC groups when compared to control group. ROC curve of serum NRP1 showed sensitivity was 93.3%, specificity 80%, PPV of 82.4% and NPV of 92.3% with AUC of 0.842 at cutoff value of 4030 pg/ml.

Discussion/Conclusion: NRP-1 may represent a potential and reliable diagnostic marker for HCC.

19. Spontaneous bacterial peritonitis – The role procalcitonin in differentiation between classically SBP and neutrocytic ascites in patients with liver cirrhosis

Mostafa Elkady (Benha, EG), Hany Eleraky (Benha, EG), Yasser Ismael (Benha, EG), Asteer Sabaa (Cairo, EG)

Introduction: Spontaneous bacterial peritonitis (SBP) is the most frequent life threatening in patients with liver cirrhosis., that why early diagnosis is vital to shorten hospital stays and reduce mortality. The aim of the current study is to is evaluate and compare the possible diagnostic role of procalcitonin in discrimination between SBP and culture negative neutrocytic ascites.

Methods: The study involved 54 patients with liver cirrhosis divided into two groups:
Group I: (27 cases) with liver cirrhosis with classic SBP.
Group II: (27 cases) with liver cirrhosis with culture negative neutrocytic ascites. All involved patients in this study will be subjected to full clinical check-up – laboratory testing, CBC,

CRP, ESR.* renal function tests.* HCV antibodies, HbsAg, and liver function tests (albumin, total and direct bilirubin, alkaline phosphatase and GGT).* urine analysis , stool analysis,
- Ultrasonography
- Ascitic fluid analysis
- Estimation of procalcitonin level in blood after that MELD Score and CHILD Score were estimated.

Results: Statistically significant difference between the two groups classic SBP and culture negative neutrocytic ascites regarding procalcitonin. The mean procalcitonin in group I was 1.67 3 0.66 SD with range (0.30–2.50) however the mean procalcitonin in group II was 0.62 3 0.49 SD with range (0.02–1.80).

Discussion/Conclusion: S. PCT is a good predictor marker for diagnosis of SBP and highly increased in patients with classic SBP than culture negative neutrocytic ascites.

20. Immune-mediated colitis (IMC) and inflammatory bowel disease (IBD) – How big is the overlap?

Diogo Feijo (Coimbra, PT), Sandra Lopes (Coimbra, PT), Sofia Mendes (Coimbra, PT), Francisco Portela (Coimbra, PT), Pedro Figueiredo (Coimbra, PT)

Introduction: IMC is increasingly more prevalent due to the higher use of immune checkpoint inhibitors (ICI) for the treatment of several advanced neoplasms. We present two cases of IMC that in some points can mimic IBD.

Cases: A 68-year-old female was diagnosed with advanced lung adenocarcinoma. Due to disease progression after chemotherapy, she started nivolumab. At the end of the 4th year of treatment, she started to report bloody diarrhea and abdominal pain. Microbiological stool testing was negative, and a colonoscopy revealed congestive and friable mucosa throughout the colon, with biopsies describing chronic colitis lesions with signs of activity suggesting ulcerative colitis. She was diagnosed with grade 2 IMC. Nivolumab was discontinued and she underwent 2 cycles of prednisolone, with resolution of symptoms. Fecal calprotectin (FC) was 285 mg/kg. She performed another colonoscopy, which showed only mild erythema. She was left only on oral mesalazine.

A 69-year-old female was diagnosed with invasive melanoma and began an association of ipilimumab and nivolumab. Six weeks later, she was diagnosed with grade 3 colitis, after a colonoscopy that showed congestive mucosa and erosions throughout the colon and biopsies describing unspecified colitis, probably drug-induced. FC was 3034 mg/kg. She was firstly refractory to prednisolone, then to vedolizumab, and finally became asymptomatic after induction with infliximab. One month later, she restarted nivolumab in monotherapy. She then began with polyarthralgia, and switched from nivolumab to pembrolizumab. Two months later, she resumed with diarrhea, and, at this point, it was decided to stop the ICI. Six months later, she had no disease progression and was asymptomatic.

Discussion: We aim to discuss the significant clinical and endoscopic overlap between IMC and IBD, and also the same potential therapeutic options.

21. Particularities of the long-term treatment of non-alcoholic steatohepatitis in obese patients

Amelia Valentina Genunche-Dumitrescu (Craiova, RO), Carmen Daniela Neagoe (Craiova, RO), Carmen Daniela Badea (Craiova, RO), Mihail Badea (Craiova, RO), Roxana Surugiu (Craiova, RO), Aurelian-Adrian Badea (Bucharest, RO)

Introduction: We assessed comparatively the effects of UDCA monotherapy, simvastatinum and combination between UDCA and vitamin E in the treatment of NASH associated with severe obesity. Also, we monitored the effect of the association between therapy and low caloric diet.

Methods: We studied 53 patients with NASH and obesity. We excluded patients with viral or autoimmune hepatitis, diabetes mellitus or drug abuse. Liver biopsy was performed before and after therapy. We evaluated liver function tests, serum lipids and BMI after 6 and 12 months.

A group composed of 18 normolipidemic cases, treated with UDCA 13–15 mg/kg/day, B group consist of 15 hyperlipidemic cases which received simvastatinum 20 mg/day and C group (20 patients) with UDCA and vitamin E (400 IU twice a day) therapy.

Results: A number of 39 patients had elevated serum aminotransferase level, but 14 had normal values. In B group, lipide profile was: 7 cases with hypercholesterolemia, 4 cases with hypertriglyceridemia and 4 with both. In A group, mean value of serum ALT-level was decreased from 88.3 + 21.7 U/l at baseline, to 52.12 + 17.5 U/l at 6 months. In B group, serum ALT was reduced (in mean with 19.3+7.2 U/l) after 6 months and cholesterolemia was significantly improvement in 8 cases (72.7%). In 2 cases we increased simvastatinum dose at 40 mg/day. In C group mean ALT and AST levels was more decreased: in mean with 49.3 + 5.2 U/l. After one year, aminotransferase levels reach normal range only in C group. Comparatively, in A and B groups the normalisation rates of ALT was lower (89.7% and 73.33%). The association between UDCA and vitamin E had a significant and positive effect in the improvement of steatosis, lobular inflammation and fibrosis. After 12 months the rate of the improvement of steatosis grade was significantly better in C group: 73.3% in A group, 58.7% in B group and 89.1% in C group. Multivariate analysis showed that the BMI > 35 kg/m2 and elevation of serum ALT were associated with steatosis grade. Patients which associated combined therapy with change of the lifestyle and low caloric diet had a good and rapid response.

Discussion/Conclusion: The combination between UDCA and vitamin E significantly improves liver function tests and steatosis grade in long-term therapy and is very well tolerated. The combined therapy and low caloric diet still remains first line therapy in patients with NASH and obesity.

22. Role of association between gluten-free diet and therapy in inducing and maintenance remission in patients with celiac disease in autoimmune hepatitis

Amelia Valentina Genunche-Dumitrescu (Craiova, RO), Carmen Daniela Badea (Craiova, RO), Carmen Daniela Neagoe (Craiova, RO), Mihail Badea (Craiova, RO), Roxana Surugiu (Craiova, RO), Aurelian-Adrian Badea (Bucharest, RO)

Introduction: The aim of this study was the assessment the efficacy of association of gluten-free diet with budesonide-azathioprine combined therapy in patients with autoimmune hepatitis (AIH) and celiac disease (CD).

Methods: We studied 55 patients (37 females/18 males, mean ages 43.2 years) with AIH, treated with combined therapy with prednisone (40 mg/day and tapered to 10 mg/day) and azathioprine (1–2 mg/kg/day) or with Budenofalk® (3 mg, oral doses three times daily) in association with azathioprine (1–2 mg/kg/day). Six of these patients with AIH (6 cases, 10.9%) were tested positive in celiac blood tests (positive for anti-IgA tissue transglutaminase) and were subsequently confirmed to be affected with CD by small-bowel biopsy findings. After CD detection, patients diagnosed with both CD and AIH continued current therapy for AIH and were associated this treatment with a gluten-free diet (GFD). We monitoring, for a 12

months period, the activity disease and evaluated response of therapy.

Results: Structure of the lot of patients indicate predominant cases of AIH type I (40 cases, 72.73%) comparative with type II AIH (15 cases, 27.27%). The incidences of CD was significantly higher in type I AIH (5 cases, 12.5%) comparative with type II AIH (1 case, 6.66%). In one case (16.66%) celiac disease was asymptomatic. GFD was associated in all cases with AIH therapy: in 3 cases with budesonide-azathioprine combined therapy, in 2 cases with prednisone-azathioprine and in one case with azathioprine monotherapy. After 6 months, intestinal biopsies were reported to be normal in two patients who associated GFD with budesonide-azathioprine combined therapy (66.67%). Also, disappearance of clinical symptoms of CD was observed in all patients with GFD and budesonide-azathioprine therapy. We have not found a correlation between GFD and rate of histological remission of AIH, but after 12 months on a GFD, normal liver biochemistry (liver enzyme tests) was observed in most patients with CD and AIH (3 cases, 50.0%).

Discussion/Conclusion: The gluten-free diet associated with budesonide-azathioprine combined therapy, is effective in induces and maintains remission in patients diagnosed with both CD and AIH. Long term gluten-free diet may have a beneficial effect in reversing autoimmune liver disease in patients with CD.

23. Geographic distribution in IBD patients in Romania – A multicenter-based study

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Introduction: We conducted a prospective study over a period of 12 years in 10 University Centers, from 2006 to 2017. All patients diagnosed with IBD on clinical, radiological, endoscopic, and histological features were included. We divided the country into 8 regions: west (W), north-east (NE), north-west (NW), south-east (SE), south-west (SW), south (S), central (C), and Bucharest-Ilfov (B), and data were analyzed accordingly.

Methods: We included all patients diagnosed with IBD based on clinical, radiological, endoscopic, and histological features. Variables collected included age, gender, date of diagnosis, family history, and smoking status.

3 A total of 2724 patients were included in this database, but only 2248 were included in the final analysis, with all data available. 935 were CD, 1263 were UC and 50 were IBD-undetermined. In UC phenotypes we observed more frequent left-sided colitis (50.5%, $p < 0.0001$), and in CD phenotype we observed more frequent colonic and ileocolonic localization (37.8% and 37.6%, $p < 0.0001$). The region with the most IBD cases was NE (25.1%) and with the least IBD cases was SW (4.9%). UC was found more frequently in NE (32%), while CD was found more frequently in Bucharest (28.6%).

Discussion/Conclusion: In Romania ulcerative colitis is more frequent than Crohn disease. UC is predominant in the northern part of Romania, while Crohn disease has become predominant in the southern part of the country. IBD occurs more in the male population, urban and industrialized aria. There are differences between the regions in Romania regarding IBD phenotypes, gender distributions, age distribution, treatment, smoking status and complications. This study contributes to the knowledge of the epidemiology of IBD in Romania. It provides data about the regional distribution and regional differences in IBD in Romania.

Another prospective multi-center study has started in 2020 and will continue for the next years. It should confirm if the gradient north-south regarding UC/CD will persist.

24. The diagnostic value of hepatocyte paraffin antibody 1 in differentiating hepatocellular carcinoma from non-hepatic tumors

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Introduction: Hepatocellular carcinoma (HCC) is the most common primary liver neoplasm, often difficult to differentiate from cholangiocarcinoma (CC) and metastatic carcinomas on usual histological sections. Distinguishing HCC from other malignant tumors using immunohistochemical (IHC) staining techniques was limited by the lack of a reliable IHC marker for hepatocellular differentiation. The aim of our study was to evaluate the diagnostic utility of Hep Par-1 in differentiating HCC from metastatic carcinoma, taking histopathology as a gold standard.

Methods: The studied material consisted of patients admitted in surgical Clinics in Timisoara and it was divided into two groups.

In the first group we included conventional tissue sections from paraffin blocks of 20 patients with clinical diagnosis of hepatic carcinoma (who underwent curative hepatic resection). The second group (six cases) was made up of hepatic tumor fragments obtained by laparoscopy (two cases) and four hepatic resection pieces for non-hepatic tumors.

The usual morphological investigation was made on sections stained with hematoxylin-eosin (HE). In all analyzed cases, the initial clinical diagnosis of HCC was confirmed on histological sections stained with HE, allowing the establishment of the histopathological diagnosis, the subtype and degree of differentiation of the hepatic tumor.

Results: We obtained:

- Positive Hep Par-1 immunoreaction in 75% of HCCs, with a heterogeneous or patchy pattern in tumor tissues and a uniform staining of the non-neoplastic liver tissue surrounding the tumor.
- Hep Par-1 expression correlated with the degree of HCC differentiation.
- Uniform Hep Par-1 expression, intense and diffuse in acinar/pseudo glandular and trabecular HCC, heterogeneous in clear cell HCC with fat deposition and bile secretion, as well as the absence of immunoreactions in anaplastic carcinomas.

Discussion/Conclusion: This IHC study on the hepatocellular differentiation marker demonstrated Hep Par-1 expression in 75% of the studied hepatic carcinomas.

Hep par-1 is a reliable immunohistochemical marker for cases of HCC. It can be used along with other markers in morphologically difficult cases when differential diagnosis lies between poorly differentiated HCC and metastatic carcinoma of the liver.

25. Long-term outcomes and predictors of vedolizumab persistence in ulcerative colitis – A six-year follow-up study

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Introduction: Long-term vedolizumab (VDZ) outcomes in real-world cohorts have been largely limited to 1-year follow-up, with few bio-naive patients or objective markers of inflam-

mation assessed. We aimed to assess factors affecting VDZ persistence including clinical, biochemical and faecal biomarker remission at 1, 3 and 5 years.

Methods: We performed a retrospective, observational, cohort study. All adult IBD patients who had received VDZ induction for UC/IBDU were included. Baseline phenotype and follow-up data were collected via review of electronic medical records.

Results: We included 290 patients (UC, n = 271 [93.4%], IBDU, n = 19 [6.6%]), median time on VDZ 27.6 months (IQR, 14.4–43.2). At the end of follow-up, a total of 157/290 (54.1%) patients remained on VDZ. Median time to discontinuation was 14.1 months (IQR, 7.0–23.3 months). Reasons for drug discontinuation: 51 (17.6%) primary non-response, 63 (21.7%) secondary loss of response [8 (2.8%) during the first year; 33 (11.4%) between the first and second year; 13 (4.5%) between the second and third year; 5 (1.7%) between the third and fourth year and 4 (1.4%) over the fourth year], 9 (3.1%) adverse event, 4 (1.4%) remission and 6 (2.1%) other reasons. Multivariable Cox Regression model found previous exposure to one biologic/small molecule (HR = 1.52, 95% CI: 1.03–2.22, p = 0.033); two or more biologic/small molecule (HR = 2.37, 95% CI: 1.37–4.09, p = 0.002), steroid at baseline (HR = 1.57, 95% CI: 1.08–2.29, p = 0.019), left-side colitis (HR = 2.80, 95% CI: 1.11–7.09, p = 0.029), extensive colitis (HR = 3.32, 95% CI: 1.34–8.21, p = 0.010) and disease duration ≥ 10 years (HR = 0.60, 95% CI: 0.43–0.86) were independent predictors for VDZ persistence. Clinical, biochemical and faecal biomarker remission at year 1 were 171/226 (75.7%), 157/217 (72.4%) and 127/181 (70.2%); at year 3, 83/92 (90.2%), 78/91 (85.7%) and 52/59 (88.1%) and at year 5, 23/25 (92%), 23/26 (88.5%) and 15/17 (88.2%) respectively. During follow-up, steroids prescription was needed in 98 (33.8%), hospitalization 45 (15.5%) and surgery 10 (3.4%). Serious adverse events were 1.2 per 100 patient-year follow-up.

Discussion/Conclusion: VDZ persistence is influenced by disease duration, previous exposure to biologics/small molecules, disease extension and steroids at baseline. VDZ effectiveness is durable and its safety is confirmed in our study.

26. Body surface gastric mapping and real-time symptom profiling in patients with suspected gastroparesis

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Introduction: Management of gastroparesis is challenging due to its complex nature. The utilization of the novel body surface gastric mapping (BSGM) technique may provide valuable insights into gastric neuromuscular dysfunction and symptomatology.

Methods: Patients with negative endoscopy and symptoms suggestive of gastro-paresis (nausea ≥ 1 day/week and simultaneous postprandial distress syndrome) undergoing a gastric emptying (GE) breath test (250 kcal solid meal) were included. BSGM (Gastric Alimetry, Alimetry) was performed 30-minute fasting and 4-hour postprandially. Six gastroduodenal symptoms (0–10 scale) were assessed at 15-minute intervals and combined to form a "Total Symptom Burden" score. Data analysis included subgrouping patients based on GE and correlating symptom severity/phenotypes and BSGM findings.

Results: 51 patients (82.4% female, median age 37 (26–57) years, BMI 22.5 (20.3–26.7) kg/m2) were analyzed. 27.5% patients had abnormal BSGM, including 4 low rhythm stability, 1 low fre-

quency, 8 high frequency and 1 high amplitude. When subgrouping patients into normal and delayed GE, 29.4% of patients had delayed GE (half gastric emptying time > 109 min) which was associated with higher symptom severity scores for nausea (p = 0.008), but it did not correlate with abnormal BSGM findings (26.7% vs. 27.8%, p = 0.935). When categorizing symptom profiling, in the normal GE group, the distribution included meal-induced (25%), meal-relieved (2.8%), normal on day (19.4%), sensorimotor (11.1%), continue (13.8%), other (25%), and activity relieve (2.8%) phenotypes. Meanwhile, the delayed GE group exhibited distribution percentages of meal-induced (33.3%), meal-relieved (13.3%), postgastric (13.3%), continue (20%), other (6.7%), and sensorimotor (13.3%) phenotypes. The electrical activity-related symptom phenotypes were more common in patients with delayed GE (26.6%) compared to the normal GE (13.9%), but the difference was not statistically significant (p = 0.275).

Discussion/Conclusion: Patients suspected of gastroparesis exhibit diverse symptom phenotypes and frequently experience gastric myoelectrical dysrhythmias, regardless of their gastric emptying status. To achieve personalized treatment, a comprehensive approach integrating symptom profiling and physiological biomarkers is crucial.

27. Immunohistochemical expression of Bruton's tyrosine kinase in endoscopic tissue material from patients with inflammatory bowel diseases

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Introduction: Bruton's tyrosine kinase (Btk) plays a fundamental role in B-cell development as it is required for the transduction of signals from the pre-B-cell receptor, which forms after successful immunoglobulin heavy chain rearrangement. Moreover, it also plays a role in mast cell activation via the high-affinity IgE receptor. Recent study confirmed that BTK-deficient mice had enhanced pro-inflammatory Th1 response in the gut, arising from both T cell-extrinsic and -intrinsic mechanisms. Therefore, the objective of the present investigation is to analyze an immuno-histochemical expression of Bruton's tyrosine kinase protein in endoscopic material of ulcerative colitis (UC) and Crohn's disease (CD) patients.

Methods: The study group consists of 34 patients with ulcerative colitis and 8 patients diagnosed with Crohn's disease. The activity of diseases were examined according to Geboes score in UC and to Brennan classification in CD. The expression of Bruton's tyrosine kinase protein was performed by immunohistochemistry. We assessed positive a membrano-cytoplasmic color reaction in small, mononuclear B lymphocytes concentrated in lymphoid- like follicles or in lamina propria, and in the superficial epithelium. Tissue sections from normal colon were used as a positive control.

Results: Analysis of normal colon tissue showed a positive reaction of Bruton's tyrosine kinase protein in glandular epithelium and in single B lymphocytes in the lamina propria. Bruton's tyrosine kinase- positive lymphocytes were observed in the lamina propria in 16 cases of UC and in 5 cases of CD. B lymphocytes organized in lymphoid- like follicles were present in only 4 cases of patients with UC. Approximately 50% of patients with UC and CD did not express Btk protein at any site. Lymphocytes expressing Btk+ were found to correlate with the infiltrate of CD15+ macrophages (R = 0.362), CD138+ cells in lamina propria (R = 0.482) and Btk + superficial epithelium (R = 0.528). We find the correlation between Btk–positive superficial epithelium and gender (R = 0.410) in patients with UC and the age (R = -0.881) of CD cases.

Discussion/Conclusion: Our study showed that assessment of Btk expression could allow identification of patients in whom anti-B cell treatment would be beneficial.

28. Extraintestinal manifestations in patients with inflammatory bowel disease – 5-year experience

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Introduction: The aim of our study was to evaluate the prevalence of extraintestinal manifestations in inflammatory bowel disease (IBD) patients as in Crohn's disease (CD) group as ulcerative colitis (UC) also, treated with 5-ASA, 5-ASA + steroids and biological therapy. We have shown our 5 years observation results from our IBD patients' database.

Methods: 194 patients were included in the study (114 female, 80 male, mean age 37,5; range 29–45 years). They were divided into two groups: IBD – UC patients (n = 120) and IBD – CD patients (n = 74). Total colonoscopy with intubation in terminal ileum was performed to all patients and diagnosis was confirmed clinically, serologically and morphologically. Any other chronic diagnosis was absent in all cases of patients.

Results: Extraintestinal manifestations IBD (n = 194) = UC (n = 120) + CD (n = 74): Nephrolithiasis 23 (11.7%), Pioderma gangrenoso 8 (4.3%), Peripheral arthropathy 39 (20.2%), Aphthous stomatitis 31 (16%), Episcleritis, uveitis, iritis 6 (3.2%), Nodal erythema 31 (16%), Primary sclerosing cholangitis 12 (6.4%), Autoimmune hepatitis 8 (4.3%), Bronchiectasis 2 (1.1%).

It should consider that in 27 cases of IBD patients we have mentioned the overlap of various extraintestinal manifestations.

Discussion/Conclusion: According to our study – the peripheral arthropathy, nodal erythema and aphthous stomatitis as extraintestinal manifestations occurred in a significantly higher proportion of inflammatory bowel disease patients. Multivariable analyzes revealed, that female sex and steroid usage were significantly associated with the presence of extraintestinal manifestations.

29. Can procalcitonin be used as an early detection tool of Clostridioides difficile infection in inflammatory bowel disease?

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Introduction: Patients with inflammatory bowel disease (IBD) are at high risk of developing Clostridioides difficile infection (CDI) with greater morbidity and mortality than the general population. CDI is a bacteria that can increase the risk of treatment lack of response, surgery and hospitalization of IBD patients. A differential diagnosis can be difficult due to the similarity of symptoms in IBD and CDI therefore any test that can promptly diagnose CDI in IBD would be of great utility.

Methods: This retrospective study included 48 patients with IBD hospitalized between 1st January 2022–31st December 2022 who were divided in 3 groups: 18 patients with CDI (group 1), 14 with viral or fungal infections (group 2) and 16 IBD patients without acute infections (group 3). We studied the values of procalcitonin (PCT), C-reactive protein (CRP) and white blood cell (WBC) at presentation for these patients.

Results: PCT diagnostic levels were significantly higher in group 1 than in group 2 and 3 ($p < 0.001$ and $p < 0.05$). Regarding the CRP levels group 1 had significantly higher levels than group 2 and 3. The study showed that the AUCs (area under the curve) of PCT vs: CRP in group 1 and group 3 was 0.805 vs. 0.602 ($p < 0.05$) using DeLong's test. Regarding WBC count the sensitivity and the specificity showed it had an inferior diagnostic value.

Discussion/Conclusion: This study indicates the fact that PCT has a higher diagnostic value over CRP and WBC count for a promptly diagnose of CDI in IBD.

30. Abdominal sonographic findings in rare inborn errors of metabolism: A single-center retrospective study in 131 adult GD, 38 GSD and 13 FAOD patients

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Introduction: Glycogen storage diseases (GSD), Gaucher disease (GD) and fatty acid oxidation disorders (FAOD) are monogenetic enzyme deficiencies with a frequent gastrointestinal/hepatic phenotype. Whereas GSD reside on dysregulated metabolism of glycogen, GD is a storage disease (LSD) caused by impaired lysosomal degradation of glucocerebroside with subsequent storage of glycolipids in macrophage-monocytic cells. FAODs lead to impairment of mitochondrial β-oxidation during stress. The specific nature of abdominal ultrasound findings in these patients is unknown but all diseases have a potential for cirrhotic or malignant transformation.

Methods: This study focuses on abdominal sonographic findings in GSD, GD type I and FAOD. Data were used from a single-center retrospective study: here, 38 adult GSD type Ia/b patients, 131 adult GD type 1 patients and 13 adult patients with FAODs (VLCAD, MCAD) were examined with standard abdominal B-mode ultrasound. If focal liver lesions were found, an advanced standard workup using elastography and contrast-enhanced ultrasound (CEUS) was performed in a fraction of patients. The study was approved by local nameable IRB votes.

Results: All three entities regularly display signs of hepatosplenomegaly and/or hepatic steatosis. Out of 38 screened patients with GSD type Ia or Ib, 10 patients with hepatic adenomatosis were identified, one leading to hepatic surgery. No HCC was found. In 131 screened patients with GD I, 15 patients with focal liver or splenic lesions were found. Three of these patients finally developed HCC, published earlier. In 13 screened patients with FAOD, 7 had hepatomegaly, splenomegaly and/or steatosis hepatis. Focal lesions were absent.

Discussion/Conclusion: Particular IEM are associated with specific abdominal ultrasound findings. Simple B-mode ultrasound and CEUS can help detect early potential disease-associated complications such as fibrosis, cirrhosis and transformation of hepatic/extrahepatic benign into malignant lesions. GI sonologists should aim at getting knowledge about IEM-specific ultrasound findings.

31. Clinical outcome in female IBD patients who stop anti-TNF treatment during the third trimester of pregnancy

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Introduction: Anti-TNF drugs are safe during pregnancy in inflammatory bowel disease (IBD), but some guidelines still recommend stopping them during the third trimester. In our cohort of female pregnant IBD patients, anti-TNF monotherapy was associated with an adverse clinical outcome in the following year after discontinuation.

Methods: Retrospective, longitudinal study on female IBD patients receiving anti-TNF agents who discontinued the anti-TNF in the third trimester, matched in a 1:1 ratio with non-pregnant female IBD controls by age, type of IBD, type of anti-TNF, duration of treatment, location, and behavior of IBD. Demographic and clinical variables were collected from 18 months before anti-TNF discontinuation and 12 months after, and when available endoscopic scores

(SES CD and UC). We search for any adverse clinical outcome during the follow-up that includes development of disease flare, corticosteroid use, hospital admission, need for surgery, anti-TNF dose escalation, or anti-TNF switch.

Results: We included 34 pregnant patients and 34 controls. Patients who stopped anti-TNF more frequently presented an adverse clinical course during the follow-up year when compared to the control group (47.1% vs. 23.5% p = 0.04) and an acute flare (35, 3 vs. 11.8%, p = 0.02), hospital admission, and surgery. We found no differences in escalation or biologic switch, between the subjects. In the multivariate analysis, anti-TNF monotherapy (p = 0.009) anti-TNF discontinuation (p = 0.042) m were the independent factor for developing an adverse clinical outcome up to 1 year after anti-TNF discontinuation, being in treatment in combination with immunosuppressant a protective factor (OR = 0.2, 95% CI: 0.08–0.72).

Discussion/Conclusion: In our cohort of female pregnant IBD patients, anti-TNF monotherapy was associated with an adverse clinical outcome in the following year after discontinuation.

32. Outcomes of transcatheter aortic valve implantation in gastrointestinal bleeding

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Introduction: Heyde's syndrome is characterized by a triad of aortic stenosis, angiodysplasia with bleeding and acquired von Willebrand syndrome; it is an uncommon cause of gastrointestinal bleeding and iron deficiency anemia. Hypothesis: transcatheter aortic valve implantation (TAVI) might reduce the presence of gastrointestinal angiodysplasia and their complications.

Aims: to compare the existence of anemia (hemoglobin levels), requirements for blood transfusion, hospitalizations for gastrointestinal bleeding and number of endoscopies performed in patients with aortic stenosis before and after TAVI, and describe the medical treatment offered in the Gastroenterology consultation.

Methods: Quasi-experimental study with before-and-after design. Data of TAVI performed from January 2018 to December 2020 were collected, and subjects with prior diagnosis of angiodysplasia were selected (n = 10) for further analysis.

Results: Ten of the 146 patients (6.85%) who had a TAVI performed had a prior diagnosis of angiodysplasia. The mean age of the patients with angiodysplasia at time of the TAVI procedure was 83.27 years (SD 3.77); 60% were males. Regarding medical treatment, 8 patients (80%) were followed in gastroenterology consultation. Apart from endoscopic therapy, iron infusion and blood transfusion, octreotide was administered in three of them (37.5%). The mean level of hemoglobin in the 12 months before TAVI was 10.79 g/dl vs. 12.01 in the 12 months after TAVI; with statistically significant difference (p = 0.0479). There were also statistically significant differences in the comparison of the mean of hospitalizations, endoscopies and blood transfusions before and after TAVI

Discussion/Conclusion:

- TAVI reduces gastrointestinal bleeding and improves anemia, so it decreases blood transfusion requirements.
- Anemia, in selected cases, might constitute a criterion for aortic stenosis intervention in the future.
- A multidisciplinary follow-up in Gastroenterology consultation is necessary in order to prepare the patient to the TAVI procedure, by offering endoscopic and medical treatment with somatostatin analogs when iron infusion and blood transfusion are not enough.

33. Association of the polymorphisms CLEC7A gene rs2078178 and rs16910631, and the CLEC5A rs1285933 with IBD susceptibility

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Introduction: Inflammatory bowel diseases (IBD) are thought to arise due to interplay between genetic and environmental factors. The CLEC5A and CLEC7A genes code for two members of the C-type lectin receptor superfamily, which participate in the immune response against various pathogens, mediate the inflammatory signaling and may contribute to the emergence of a plethora of diseases. CLEC5A polymorphisms and expression levels have been linked to CD risk. CLEC7A has been implicated in fungal dysbiosis, severe chemically induced colitis in mice and undertreated UC in humans. The aim of this study is to explore whether certain CLEC5A and CLEC7A polymorphisms contribute to the risk for Crohn's disease (CD) and ulcerative colitis (UC).

Methods: 112 CD patients, 94 UC patients and 164 sex- and age- matched controls were genotyped for the SNPs rs2078178, rs16910631 of the CLEC7A gene and rs1285933 of the CLEC5A gene, respectively.

Results: The CLEC7A rs2078178 AA genotype was significantly more frequent in UC patients compared to healthy individuals, suggesting a greater risk of AA carriers. The CLEC7A rs16910631 CT genotype was significantly associated with UC risk compared to the control group, while the correlation with CD did not reach statistical significance. The CLEC5A rs1285933 GA genotype was significantly found to be protective against UC and both GA and AA genotype against CD. Reduced susceptibility to CD development was also noted among rs1285933 A allele carriers, implying that the presence of A allele could be protective for IBD development and specially for CD.

Discussion/Conclusion: To the best of our knowledge, this is the first study that explores the possible association of CLEC5A rs1285933 with the risk for UC. The rs2078178 AA genotype and the CLEC7A rs16910631 CT could be promising biomarkers for UC susceptibility.

34. Knowledge empowers achievement: Lifestyle intervention in NAFLD

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Introduction: Lifestyle modification is the mainstay of therapy in non-alcoholic fatty liver disease (NAFLD), with diverse multidisciplinary intervention programs showing promising results. We conducted an intensive education-oriented lifestyle management program with the objective of evaluating its efficacy.

Methods: A team of five specialists (hepatologist, psychologist, kinesiologist, two nutritionists) led a 12-week program. A total of 8 NAFLD patients (7 male, median age 43.5 years, median BMI 31.5 kg/m2) were enrolled. Six 2.5-hour-long afternoon sessions consisted of lectures on NAFLD pathophysiology, as well as lectures focusing on physical activity and the psychological underpinnings of unhealthy habits. In addition, interactive workshops and lectures on nutrition were provided. To monitor physical activity levels, participants were requested to utilize a step tracking application on their smartphones, with a target of achieving 10,000 steps per day. Psychological support was readily available as needed throughout the program. Pre- and post-intervention assessments of nutritional status were conducted, and participants were administered a feedback questionnaire upon program completion.

Results: Three participants were unable to attend all sessions, and only five underwent nutritional re-evaluation, demonstrating a median fat tissue loss of 8.5%. All participants reported significant improvements in their understanding of NAFLD, acknowledged positive changes in their dietary habits, and consistently utilized the step tracking application, resulting in enhanced daily step counts. Furthermore, attendees expressed that the size of the participant group was optimal, as it fostered an environment conducive to open discussions about personal health matters.

Discussion/Conclusion: Our findings indicate the efficacy of the education-oriented program, however, further validation through a larger patient cohort is warranted.

35. Is a negative FIT falsely reassuring? A retrospective evalua-tion

Sarah Manning (Whitley Bay, GB)

Introduction: FIT (faecal immunochemical test) is now recommended by the British Society of Gastroenterology for assessment of all patients with lower GI symptoms, except for those with palpable masses. It may avoid unnecessary colonoscopies in select cases. However, previous studies report a cancer miss rate of 7–13%. The aim of this audit was to identify the number of FIT-negative new CRC cases in a single centre.

Methods: This was a single centre, retrospective audit. New CRC cases between June and December 2021 were identified. Bowel cancer screening patients were excluded. Where histology was available, adenocarcinomas and polyps with high grade dysplasia were included. If only a radiological diagnosis was available, patients were included if the diagnosis was presumed to be CRC. Neuroendocrine tumours, cancers of non-colorectal primary, lymphomas and anal squamous cell carcinomas were excluded. Data was collected on presenting symptoms and tumour location. A FIT < 10 ug/g was considered negative.

Results: 122 patients were included. 67 of these had FIT tests prior to diagnosis, of which 5 were negative (7.5%). Of the FIT negative cases, age ranged from 56–82 and cancer location varied (rectum, splenic flexure, hepatic flexure, ascending colon and caecum). Two patients presented with iron deficiency anaemia and one each with rectal bleeding, weight loss and diarrhoea with weight loss.

Discussion/Conclusion: 7.5% of CRC cases had a negative FIT. This adds to the existing body of evidence that a negative FIT does not rule out CRC in symptomatic patients. Clinicians must bear this in mind, thoroughly assess risk factors and use clinical judgement when considering whether to refer or investigate.

This was a small, single centre audit and further studies with larger data sets are required to accurately assess FIT's sensitivity and specificity.

36. TIL's lymphocyte expression in patients with colorectal cancer

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Introduction: Colorectal cancer cells are infiltrated by different types of immune cells. They are scattered throughout the medulla, stroma, and glands of the tumor, as well as in the invasive margin and in organized lymphoid follicles distant from the cancerous lesion. The aim of the study was to presence of CD8+ T lymphocyte infiltration in the tumor and its front in correlation with clinicopathological parameters.

Methods: The study included a group 62 of patients operated on due to colorectal cancer. The histopathological results of the patients were analyzed, including the assessment of

the expression of CD8+ T lymphocytes in the main mass of the tumor and its front, and an analysis of correlation with the patient's age, sex, histological malignancy stage, presence of metastases to lymph nodes and distant metastases was performed.

Results: Statistical significance was demonstrated for the correlation between the differentiation of TCD8+ infiltration in the invasion front and the presence of distant metastases (p = 0.041). Statistical significance was demonstrated for the correlation between the differentiation of TCD8+ infiltration in the invasion front and the depth of tumor infiltration (p = 0.042).

Discussion/Conclusion: The immune response expressed by CD8+ T lymphocyte infiltration increases with the depth of tumor infiltration. An immune response expressed by a strong expression of CD8+ T lymphocytes may be an indicator of the absence of distant metastases.

37. Decrease in blood citrulline level associated with cytostatic-induced oxidative stress and liver injury on the background of chemotherapy of patients with chronic lymphopro-liferative diseases

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Introduction: Activation of oxidative stress on the background of chemotherapy (CT) of patients with chronic lymphoproliferative diseases (CLPD) can be the reason for the development of liver injury. A crucial pathogenetic mechanism of cytostatic-induced liver lesions violates enterocytes' integrity and functional capacity. Blood citrulline level is a marker of enterocytes functional capacity.

The aim is to investigate the effect of cytostatic-induced oxidative stress on the serum citrulline level and the dynamics of biochemical liver tests in patients with CLPD.

Methods: 13 patients with CLPD were studied: 7 (53.9%) patients with B-cell CLL and 6 (46.1%) patients with Small B-cell NHL. All males 13 (100%), ages 30–76. The average age 59.92 3 11.32 (95% CI: 53.08–66.76). The criteria of inclusion were the progression of CLPD. ECOG performance status – I–II. The examinations were conducted twice: before CT and after 3 courses of CT (84 3 7 days). Patients were analysed: the concentration of substances that form a trimethine complex with 2-thiobarbituric acid (TBARS), blood citrulline level, the activity of alanine (ALT) and asparagine (AST) aminotransferases, gamma-glutamyltranspeptidase (GGT), alkaline phosphatase (ALP), total bilirubin (TB).

The control group included 20 practically healthy individuals: 9 (45%) females and 11 (55%) males, ages 22–26.

Results: On initial examination, in patients with CLPD the concentration of TBARS in the blood was in 1.39 times (p = 0.0479) higher compared to the control group. However, biochemical liver tests and serum citrulline levels did not significantly differ from controls. During the conduction of CT in patients with CLPD the TBARS in the blood was in 1.28 times (p = 0.0002), the level of ALT was in 1.6 times (p = 0.02), GGT – in 1.6 times (p = 0.002), ALP – in 1.8 times (p = 0.002) higher as compared to initial examination. The citrulline level was in 1.7 times (p = 0.0002) lower compared to initial examination. The negative correlation between the blood citrulline level and concentration of TBARS (r = -0.52; p = 0.02), and the activity of ALT (r = -0.69; p = 0.01) were established.

Discussion/Conclusion: Cytostatic-induced oxidative stress in patients with CLPD is associated with a decrease of the citrulline levels and the occurrence of liver biochemical test abnormalities.

38. Use of hyperbaric oxygen therapy (HBOT) for treating enterocutaneous fistulas in Crohn's disease: Case series

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Introduction: Conventional treatment options for fistulizing Crohn's disease (CD) include surgery and immunosuppressive therapies, but these are not always effective and may carry the risk of adverse effects. In recent years, hyperbaric oxygen therapy (HBOT) has shown promise as an adjunctive treatment. The aim of this study was to evaluate the efficacy of HBOT as an adjunctive therapy for enterocutaneous fistulas in CD.

Methods: This retrospective cross-sectional study included three patients with CD, who developed enterocutaneous fistulas after surgery.

Results: Three male patients aged 45, 42, and 33 years were included. All had similar features of the disease. The disease was fistulous and required surgery. In the first patient, a right hemicolectomy had been performed seven years earlier. Resection of the ileotransverse anastomosis was performed because of recurrence of fistulae. The second patient underwent right hemicolectomy with ileocecal anastomosis. The last patient had a gastrocolic fistula and multiple enteroenteric fistulas, which were treated with subtotal colectomy, partial small bowel resection, and excision of the gastric fistula. Patients were discharged home after surgery with dual antibiotic therapy and enteral nutritional support. The postoperative course was complicated in all three patients, as enterocutaneous fistulas developed within two weeks after surgery. HBOT was indicated. Patients received 30, 57, and 41 treatments, respectively, at 2.4 bar for 60 minutes. Although symptoms and quality of life improved significantly, the fistulas were not cured, and another surgery was required.

Discussion/Conclusion: Concomitant HBOT was not associated with cure of enterocutaneous fistulas, but resulted only in symptom relief. Future prospective studies are needed to evaluate efficacy and establish protocols regarding pressure and duration of HBOT.

39. A new combination for the diagnostics of alcohol-related cirrhosis

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Introduction: We decided to investigate the diagnostic usefulness of cytokeratins (CCK18 and K18) and Golgi protein 73 (GP73) together with relationships between them, selected hematological indices (RPR, NLR and RLR) and serological markers of liver fibrosis, in the course of alcohol-related cirrhosis (ARC).

Methods: 239 persons were included in the study: 139 with ARC and 100 healthy volunteers in the control group. Serological expressions of: cytokeratins (CCK18 and K18), GP73, carboxyterminal procollagen I propeptide (PICP), aminoterminal procollagen III propeptide (PIIINP), platelet-derived growth factor AB (PDGF-AB), transforming growth factor-α (TGF-α) and laminin were evaluated in all subjects. Additionally, the following values were assessed: AAR, APRI, FIB-4, GPR, RPR, NLR and RLR.

Results: The concentration of CCK18 and K18 was significantly higher in the ARC group compared to controls ($p < 0.0001$). ARC patients with MELD score ≥ 16 presented significantly higher values of CCK18 and K18 compared to individuals with MELD score < 16. CCK18 correlated positively with PDGF-AB ($p < 0.05$). There was also a positive relationship between K18 and GPR ($p < 0.05$). Positive dependencies were noted between CCK18 and: GPR, AAR

and APRI p < 0.001, as well. In addition, CCK18 correlated positively with NLR and RLR (p < 0.001). Area under the curve (AUC) and cut-off points for CCK18, K18 and GP73 in the course of ALC were: 0.938, > 229.9 U/l, p < 0.001; 0.962, > 238.369 U/l, p < 0.001 and 0.874, > 373.547, p < 0.001, respectively.

Discussion/Conclusion: Our study seems to be the first one to verify relationships between such diverse markers in the course of ARC. Probably, in the future they will constitute common markers in diagnostics of ARC and a target in the treatment.

40. Improved functional fitness of engineered ex vivo expanded Tregs for in vivo gut homing

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Introduction: Inflammatory bowel diseases (IBD) like Crohn's disease and ulcerative colitis, are marked by an imbalance of pro- and anti-inflammatory T cells in the lamina propria of the intestinal tract. Only subgroups of patients respond to current therapeutic approaches designed to restrain pro-inflammatory cells or signalling. Adoptive transfer of autologous ex vivo expanded regulatory T cells (Tregs) has previously been suggested as a promising future therapeutic approach to resolve chronic intestinal inflammation by promoting anti-inflammatory pathways.

Methods: Using a previously established protocol for the ex vivo expansion of Tregs (Investigational Medicinal Product-Tregs; IMP-Tregs), we characterized the migration and homing capabilities as well as the immunosuppressive function of non-expanded and IMP-Tregs using 3D-motility, in vivo gut homing and T cell suppression assays. Furthermore, via electroporation with GPR15 mRNA, IMP-Tregs were engineered to express the gut homing marker GPR15 and tested for their functional fitness in dynamic adhesion and in vivo gut homing assays.

Results: Our data show that while the expansion protocol generates highly suppressive Tregs, only a fraction of them is equipped with surface molecules for gut homing. In order to overcome this limitation, we successfully engineered IMP-Tregs to express the gut homing marker GPR15. On a functional level, this led to improved adhesion to the cell adhesion molecules MAdCAM-1 and VCAM-1, which are expressed on the intestinal endothelium, as well as to increased gut homing in a humanized in vivo mouse model.

Discussion/Conclusion: In conclusion, our data indicate superior functional fitness of GPR15-engineered IMP-Tregs for homing to the inflamed gut nominating them a promising further development of autologous Treg transfer therapy for IBD.

41. Therapeutic efficacy and patterns of use of cannabis among inflammatory bowel disease (IBD) patients – Retrospective cohort study

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Introduction: The utilization of cannabis to alleviate symptoms among individuals with inflammatory bowel disease (IBD) typically involves long-term usage. To gain insights into

the efficacy of cannabis and the extended patterns of its utilization, we conducted a survey-based study.

Methods: Data from patients using cannabis for their IBD was collected at 3 time points: before (n = 108), short-term (2–12 weeks) (n = 76) and long-term (6–12 months) (n = 78).

Results: Cannabis use was associated with a significant reduction in bowel movements, diarrhea and abdominal pain and improvement in general wellbeing at both short- and long-term time points. Doses of cannabis and patterns of use changed over time towards higher doses and more smoking (rather than oral use) of the cannabis used.

Of the 271 IBD patients registered as cannabis users, data was available for 97 patients before cannabis use and 65 at short- and long-term use. Median age was 41 (33–51), 61 (56%) males, 76 (70%) had Crohn's disease, 75 (69%) were non-smokers, mean age of starting cannabis use was 38 (range 18–80).

Mean number of bowel movements was 8.3 (3 5.8), 4.7 (3 4.0) and 4.4 (3 3.4) p = 0.01. Diarrhea was present in 60 (88%), 28 (61%), and 23 (46%) p = 0.07, abdominal pain was present in 72 (82%), 39 (64%) and 30 (68%) p = 0.034 and good general well being was reported in 38%, 98% and 91% before cannabis use before, at short (2–12 weeks) and long (6–12 months) term use, respectively. In the short term, 57% consumed cannabis flowers and 47% oil (i.e. oral use) this changed to 70% and 33%, respectively, in the long term. Avarage cannabis dose was changed from 30 g/month to 40 g/month (p = 0.05) in the long-term.

Discussion/Conclusion: in this retrospective cohort study, IBD patients using cannabis had significant improvement in number of bowel movements and diarrhea. Patterns of cannabis use with increased dose and shift from oil to flowers (i.e. smoking) raise concerns that warrant attention.

42. Diagnostic accuracy and utility of non-invasive scores for NAFLD severity in primary care

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Introduction: The prevalence of NAFLD, obesity and diabetes mellitus had a significant increase in young population. The aim of our study was to correlate the mathematical scores with liver biopsy in active, young obese patients with NAFLD, to help the family doctor in the assessment of these kind of patients.

Methods: 50 young obese patients were included with evidence of hepatic steatosis on ultrasound or incidental finding of high level of liver enzymes. We excluded all the others conditions of steatosis. Personal data, medical history, clinical examination, biological explorations, transabdominal ultrasound, histological examination, non invasive scores were collected through a structured form.

Results: Of the 50 patients, 18 were men and 32 women, with an average age of 36.4 years. 28% of the patients were overweight. 52% suffered from diabetes mellitus and 90% met the criteria for metabolic syndrome. We calculated 2 scores of prediction of steatosis: Fatty liver index (FLI) and NAFLD liver fat score (NAFLD-LFS), and 2 for inflammation: Gholam and NAS score. In 92% of the patients with steatosis degree ≥ S1 (n = 48) the results of the scores were correlated with the histopathological examination. (p Chi-square < 0.0001, p Fischer = 0.0049).

The balonisation of the hepatocytes was found in 22 cases (44%). Of the 50 patients, 18 pre-

sented steatohepatitis lesions, the lobular inflammation being mild in 72% of the cases and moderate in 28%. There was a statistically significant strong connection between the NAS score and inflammation degree ($p < 0.0001$). In all patients Gholam score was over 8.22, so we could not compared with histopathological features.

Discussion/Conclusion: The non-invasive scores are most useful to exclude the lesions' evolution and to confirm the advanced stages of the disease. But, if we combine some of these scores, we can take a correct decision in choosing the patient for liver biopsy.

43. The reduction of after-hours and weekend effects in upper gastrointestinal bleeding mortality during the COVID-19 pandemic compared to the pre-pandemic period

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Introduction: In upper gastrointestinal bleeding (UGIB), admissions after normal working hours and during weekends may be associated with increased mortality.

Aim: The study aimed to assess the evolution of the after-hours and weekend effects during the Covid-19 pandemic as a result of progressive improved management despite management challenges during the pandemic.

Methods: An observational study which included patients admitted for UGIB between March 2020 and December 2021. We compared this period to the corresponding timeframe before the pandemic. Admissions were assessed based on regular hours versus after-hours and weekdays versus weekends. We stratified patients based on demographic data, etiology, prognostic scores, and the time between symptom onset and admission, as well as between admission and endoscopy. The outcomes we examined included mortality, rebleeding rate, the requirement for surgery and transfusion, and the hospitalization days.

Results: During the pandemic, we recorded a total of 802 cases, while before the pandemic, there were 1006 cases. The overall mortality rate was 12.33%. We observed that patients admitted after hours and during weekends had a higher mortality rate compared to those admitted during regular hours and weekdays (15.18% versus 10.22%, and 15.25% versus 11.16%), especially in cases of non-variceal bleeding. However, the difference in mortality rates was reduced by 2/3 during the pandemic, despite the challenges posed by Covid-19 infection. This suggests that there was an equalization effect of care in UGIB, regardless of the admission time. The differences observed in mortality rates for after-hours and weekend admissions seem to be primarily related to a higher proportion of patients who did not undergo endoscopy, while the proportion of severe cases remained similar. Blood requirements, hospital days, and rebleeding rate were similar between the two groups.

Discussion/Conclusion: Admissions during weekends and after-hours have been associated with increased mortality, particularly in cases of non-variceal bleeding. However, the impact of this association was significantly reduced during the pandemic.

44. The relationship between osteoporosis and fibrosis in NAFLD patients

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Introduction: Low bone mineral density (BMD) is associated in patients with NAFLD, but the mechanisms behind the reduced BMD are still not completely known. Aim of our study was to establish the relationship between osteoporosis and the degree of fibrosis in NAFLD patients, estimated by transient elastography (TE) with controlled attenuation parameter (CAP).

Methods: In all 145 patients we performed TE and DEXA. TE was performed by a single physician using conventional M probe or XL probe, with 10 valid acquisitions. We considered F0/F1-no/mild fibrosis, significant fibrosis (F2) when estimated cutoff was 7.1 kPa, severe fibrosis (F3) with cutoff value 9.5 kPa, and cirrhosis (F4) with cutoff value ≥ 12.5 kPa. Blood samples were collected to determinate hepatic enzymes, lipid profile, glucose, albumin, platelet count, vitamin D level.

Results: The patients were divided into two groups: group A – 7 patients with F0, F1 and group B – 48 patients with F2, F3, F4. After we performed TE 66.9% of patients had no significant fibrosis, 14.48% had F2, 9.65% had F3 and 8.97% had F4.The area under the receiver-operating characteristic curve (AUROC) of TE was 0.823 (95% CI: 0.252–0.394) ($p < 0.0001$). Mean age was 46 3 13 years in group A and 52 3 12 years in group B ($p = 0.012$). No significant differences between the two groups in waist circumference, BMI, lipid profile and degree of steatosis. Vitamin D was significant lower in group B vs. group A ($p < 0.001$). In group A we found 54 patients (55.6%) with normal T score, 23 with osteopenia and 20 (20.6%) with osteoporosis. In group B we found 18 patients (37.5%) with normal T score, 16 with osteopenia and 14 with osteoporosis (29%).

Discussion/Conclusion: In our study osteopenia and osteoporosis are more frequent in NAFLD patients with high degree fibrosis and no dependent of steatosis degree. Vitamin D level correlated negatively with the degree of fibrosis.

45. Normal calprotectin: A negative predictive value in diagnosis of inflammatory bowel disease?

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Introduction: Research has demonstrated faecal calprotectin (FC) as a useful predictive biomarker of intestinal inflammation in the diagnosis, follow-up and management of inflammatory bowel disease (IBD). Raised FC in combination with other inflammatory markers C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) as well as clinical history; prior to endoscopy and histological evidence can be strongly suggestive of a diagnosis of IBD. Pooled FC sensitivity and specificity from meta-analysis of previous prospective studies have been demonstrated to be 93% and 96% respectively. We present a cohort of confirmed IBD cases with normal inflammatory markers.

Methods: Retrospective analysis of IBD patients from a Gastroenterology department of a busy District General Hospital over a period of 4 years is included. FC, CRP, ESR were correlated with endoscopic, histological and radiological findings at the time of diagnosis. Magnetic resonance imaging (MRI) and/or ultrasound of the small bowel were used for radiological investigations. FC range used was: normal < 150 Qg/g and raised > 150 Qg/g.

Results: A total of 71 patients were diagnosed with inflammatory bowel disease (IBD) of which 50 were Crohn's disease (CD) and 21 were ulcerative colitis (UC). From the CD group were 22 males, 28 females with mean age at the time of diagnosis of 13 years (6.3–16.9) years. From the UC group were 7 males, 14 females with mean age at the time of diagnosis 10.9 years (1.7–17.3) years. Faecal calprotectin, ESR and CRP were normal in 9 patients (4 CD

[44.4%]; 5 UC [55.6%]). Of these, 100% had histological confirmation of IBD. 3 (33.3%) had radiological changes in keeping with diagnosis of Crohn's disease. Amongst the raised FC, was a subset with FC ranging between 150–200; these were classed as borderline. There were 5 within the Crohn's group and none in the UC group. All of them had normal CRP/ESR values. Radiological abnormalities were detected in 1 (20%); with normal findings in 2 (40%) whilst 2 (40%) did not have radiological investigations.

Discussion/Conclusion: Faecal Calprotectin remains a very useful non-invasive biomarker with good specificity and sensitivity. However, this cohort demonstrates 12.6% of diagnosed inflammatory bowel disease with normal FC (or 19.7% including the borderline FC). Perhaps given a strong clinical history, an isolated normal faecal calprotectin should not deter from further investigations in ruling out inflammatory bowel disease.

46. Cohort study of paradoxical psoriasis in an adolescent population receiving anti-TNFα for inflammatory bowel disease (IBD) in a large teaching hospital with specialist dermatology and paediatric gastroenterology services

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Introduction: Paradoxical psoriasis is well recognised in adults receiving anti-TNFα therapy for IBD. Biologics are increasingly being initiated earlier in the treatment ladder for IBD in the paediatric population and they are also vulnerable to paradoxical psoriasis. This observational study aimed to describe the clinical features and management in this group, as there is limited data on how paradoxical psoriasis differs in children.

Methods: A retrospective audit from a large teaching hospital of patients with IBD treated with infliximab & adalimumab over a 3 year period, who developed skin lesions. Specialist dermatology input was also analysed.

Results:

- 9 out of 119 (7.6%) IBD patients were referred with paradoxical psoriasis between 2019–2022, comprising 5 females and 4 males.
- Age range was 12–17 years (mean 15 years).
- 100% had Crohn's disease: 5 ileal involvements; 3 peri-rectal/peri-anal; 4 panenteric involvements.
- 8/9 were on infliximab and 1/9 on adalimumab.
- Onset of symptoms following anti-TNFα initiation was between 3 months–4 years (average 16.7months).
- Body sites involved: scalp (8), flexural regions (3), trunk (5) limb (3) and face (2). Scalp and retro-auricular regions more commonly affected compared to the adult population where palmoplantar involvement and a pustular phenotype are most commonly reported.
- In our cohort, a significant proportion of patients presented with an eczematous eruption affecting requiring anti-bacterial agents which is rarely seen in adults. Management of the paradoxical psoriasis included switching from infliximab to ustekinumab in 3 patients; addition of methotrexate (2). Topical treatments alone were sufficient in 4 patients.

Discussion/Conclusion: This study reiterates the need for a closer review of paediatric IBD patients on anti-TNFα with skin lesions. It is crucial for physicians to be aware of this phenomenon, ensuring patients and carers are fully counselled prior to starting treatment for earlier recognition. Thus enabling clinicians to work collaboratively in modifying treatment

promptly; optimising patients' symptoms and quality of life. Therefore, our department is aiming to expand this audit further both at a local and national level in order to further characterise this clinical entity and provide detailed management guidelines to support clinicians and patients.

47. Anatomical localization and architectural changes in the material tissues of patients with inflammatory bowel diseases correlate with the type of inflammatory cells

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Introduction: The diagnosis of ulcerative colitis and Crohn's disease is based on elementary histological lesions that include abnormalities in crypt architecture, superficial epithelial features and epithelial cell components, and an unbalanced inflammatory infiltrate cellularity in the lamina propria.

Methods: The study group consists of 34 patients with ulcerative colitis and 8 patients diagnosed with Crohn's disease. The mean age of patients was 38 years old of UC and 31 years old in CD. The activity of diseases were examined according to Geboes score in UC and to Brennan classification in CD. The expressions of various inflammatory cells: plasma cells (CD138+), T helper lymphocyte (CD4+), general population of neutrophils, macrophages and lymphocytes (CD15+) were performed by immunohistochemistry and assessed in membranous-cytoplasmic color reaction classified into two groups: present (at least mild increase in inflammatory cells) or absent (lack or weak increase in inflammatory cells)

Results: The study group consists of 16 female and 18 male in UC, and 2 female and 6 male of CD. The UC lesions were mainly located in the rectum (19/34 cases), sigmoid (8/34 cases) and other parts of the intestine (7/34 cases). Crohn's disease was observed in small intestine (3/8 cases), caecum (4/8 cases) and rectum (1/8 cases). According to the Geboes classification, we were observed in 10 cases with a score of 2, in 13 cases with a score of 3, in 5 cases with a score of 4 and in 6 cases with a score of 5. Based on the Brennan criteria, we showed 2 cases in 2 score 2 and 6 cases in score 4. We observed an increased infiltration of cells with CD15+/CD138+/CD4- phenotype in the rectum of CD ($p = 0.042$, $R = 0.875$), with increased CD15+ cell density composed of neutrophils and lymphocytes ($p = 0.019$, $p = 0.022$). the Geboes classification was characterized by the increase infiltration of CD15+ cells such as macrophages and lymphocytes ($p = 0.005$, $p = 0.001$), with a particularly absent infiltration of CD4 T helper cells ($p = 0.001$) in UC. Furthermore, a focal distortion of crypt architecture in CD sections correlated with a significant increase in CD138+ cell infiltration ($R = 0.606$).

Discussion/Conclusion: Our study has shown that the inflammatory cell phenotype can influence architectural changes and determine the effectiveness of the treatment applied.

48. The oral tissue transglutaminase inhibitor ZED1227 prevents gluten-induced enteropathy in the humanized NOD-DQ8 mouse model of celiac disease

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Introduction: Celiac disease (CeD) is triggered by gluten peptides that bind to HLA-DQ2 or -DQ8 in the small intestinal lamina propria. The CeD autoantigen tissue transglutaminase (TG2) deamidates certain glutamine residues in these peptides improving their binding to both HLAs resulting in Th1 cell expansion, small intestinal inflammation, villous atrophy and intraepithelial lymphocyte (IEL) influx.

We developed and tested ZED1227, an oral inhibitor of TG2, in the poly-IC mouse model of small intestinal inflammation and in our human-transgenic CeD (NOD-DQ8) mouse model that shows features of mild human CeD after gluten sensitization and with gluten feeding. Villous atrophy, IELs and the pattern of relevant immune cell subsets were studied in gluten challenged NOD-DQ8 mice treated with placebo or treated with oral ZED1227.

Methods: B6 Mice received intraperitoneal poly-IC together with 50 or 150 mg oral ZED1227/kg vs. vehicle 2 h before sacrifice, and intestinal TG2 activity vs. secreted and deposited TG2 was measured by incorporation of biotinyl-pentylamine. Gluten-sensitized NOD-DQ8 mice fed a gluten-containing or gluten-free diet for 3 weeks received daily oral gavages of ZED1227 (25 or 50 mg/kg) vs. vehicle for the last week.

Results: ZED1227 completely blocked intestinal TG2 activity in the poly:IC model. In NOD-DQ8 mice, ZED1227 prevented gluten-induced villous atrophy, and increases in IELs, CD45+, CD3+, CD4+, CD8+, CD68+, CD138+ and Ki67+ cells, and prevented an increase of CeD specific serum antibodies. Furthermore, ZED1227 induced regulatory T cell related transcripts.

Discussion/Conclusion:

1. Oral ZED1227 effectively blocked TG2 activity in vivo and attenuated CeD in our transgenic NOD-DQ8 mouse model.
2. The NOD-DQ8 model predicted therapeutic efficacy of ZED1227 that was demonstrated in a phase 2a clinical trial of 160 CeD patients in remission who were challenged with gluten (Schuppan et al., NEJM 2021), qualifying this model to predict efficacy of pharmacological therapies for CeD.

49. Immunohistochemical analysis of kindlin-1 (FERMT-1) expression in gastric cancer

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Introduction: Gastric cancer is a disease that, still maintains a high mortality rate, despite the decrease in morbidity. This is due to the lack of specific symptoms and late diagnosis, as a result of which the patient is usually struggling with the advanced stage of the cancer. For several years, increased research on the role of adhesion proteins in the development of cancer has been observed. The FERMT-1 gene encoding the kindlin-1 protein is recognized as an oncogene involved in tumor proliferation. Protein itself plays a role in cell matrix adhesion. It has been shown that the kindlin-1 protein increases its expression in the disorders of epithelia of the digestive and respiratory systems and in keratinocytes in the skin. Therefore, the aim of the study was the immunohistochemical evaluation of kindlin-1 (FERMT-1) protein expression in gastric cancer as well as the evaluation of the correlation with clinical and histopathological parameters.

Methods: The research was carried out on a group of 48 patients with gastric cancer. The collected sections from the tumor were stained by immunohistochemistry and then evalu-

ated microscopically. The relationship between the expression of kindlin-1 protein in cancer cells and tumor stroma and selected clinical and histopathological parameters was investigated.

Results: Higher expression of kindlin-1 protein in cancer cells and tumor stroma was observed in correlation with: histological type of adenocarcinoma without mucinous component ($p = 0.047$ in cancer cells), intermediate and poorly differentiated cancer ($p = 0.041$ in cancer cells and $p = 0.012$ in tumor stroma) and intestinal tumor type according to Lauren's classification ($p = 0.039$ in tumor stroma).

Discussion/Conclusion: The results obtained in the study indicate that the presence of kindlin-1 in neoplastic tissue is related to benign histological types of gastric cancer. Loss of kindlin-1 expression may affect the development of a more aggressive, diffuse type of gastric cancer (according to Lauren's classification) and can be associated with the initial stages of gastric cancer dissemination via lymphatic vessels. However, the expression of kindlin-1 in gastric cancer has no significant effect on tumor progression and patient survival.

50. Crohn's disease and intraabdominal abscesses

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Introduction: Perforating complications such as intra-abdominal abscesses are common in Crohn's disease (CD) patients. The purpose of this study was to record CD patients who presented with intra-abdominal abscesses and their treatment.

Methods: A retrospective study of patients with CD was conducted at Venizeleio Hospital of Heraklio Crete with data ranging from 2005–2023. The recorded data related to the patient (demographic characteristics), the disease (duration, surgeries, medication, treatment) and abscess (number, size, relation to surgery, management, outcome). Abscess classification was based on CT findings.

Results: A total of 716 patients with CD were included in the study (male: 55%, smokers: 54.5%, mean [3 SD] age: 39.0 [3 12.6] years, disease duration: 16.5 [3 8.8]). An intra-abdominal abscess was diagnosed in 11/716 (1.5%), postoperatively in 3/11. In one patient the intra-abdominal abscess was discovered at the time of the CD diagnosis. In 4/11 (36.4%) the abscess was > 3 cm. All patients were hospitalization for 19.6 (3 8.8) days and initially received a combination of ciprofloxacin and metronidazole (8/11) or cephalosporin and metronidazole. 7/11 responded to the first treatment while 3/11 needed to be switched to meropenem. 6/11 responded to conservative treatment, one underwent a radiology guided drainage while 4/11 underwent surgical intervention (3 right hemicolectomy, 1 surgical drainage). In two patients, a pathogen was isolated from the abscess (E. coli and Streptococcus oralis). 3/11 received a combination therapy with anti-TNFα and azathioprine, 2/11 monotherapy with anti-TNFα, 3/11 azathioprine, and each received a dose of vedolizumab and ustekinumab during abscess localization, 2/3 patients receiving anti-TNFα and azathioprine underwent surgery. There were adjustments in the CD related treatment in 8/11 patients after successful treatment of the abscess. No patient experienced serious complications.

Discussion/Conclusion: 1.5% of CD patients monitored in our department presented with an intra-abdominal abscess out of which 2/3 were treated successfully through a conservative approach. No correlation was found between the patient's degree of immunomodulation and the need for surgical treatment although the number of cases is too small to draw reliable conclusions.

51. A retrospective audit of adult acute food bolus obstruction and eosinophilic oesophagitis in London from 2015–2022

Thomas Rassam (London, GB)

3 Food bolus obstruction (FBO) is a common cause of referral to inpatient gastroenterology and endoscopy. Eosinophilc oesophagitis (EoE) has been found to be the most common cause of FBO and has a significant impact on quality of life.

This audit aims to analyse the management of patients presenting with FBO in Imperial College Healthcare NHS trust between 2015–2022.

Methods: Data was collected from the electronic records system retrospectively. Patients from across Imperial assessed the number or patients presenting to A&E, how many were referred to gastroenterology, the timing and nature of endoscopic assessment, including biopsies and repeated procedures, and the initial management.

Standards were taken from BSG Joint Consensus on Diagnosis and Management of Eosinophilic Oesphagitis (2022).

Results: 84 patients presented with FBO between 2015–2022. 28 (39%) were never referred to gastroenterology. 51 (61%) of these patients underwent an OGD; 51 (100%) happened as an inpatient. 41 (80%) happened on day 1 of the admission.

Biopsies were taken in 30 (60%) patients who underwent endoscopic assessment; 10 (33%) of patients had at least 6 biopsies taken. 5 patients had their initial OGD/biopsies whilst taking a PPI. All of these were repeated off a PPI.

13 (15%) patients were diagnosed with EoE and were followed up in the Gastroenterology clinic. All patients were initially treated with a PPI; 3 patients went on to have budesonide orodispersable tables (Jorveza®).

Discussion/Conclusion: A significant number of patients are not referred to gastroenterology/endoscopy from ED.

33% of patients had at least 6 biopsies; this is greater than in a similar audit done in the North-East of England (20%).

13 (15%) patients were diagnosed with EoE. The study from the North-East had 24 (41%) patients diagnosed with EoE who's presenting complaint was FBO.2 In those diagnosed with EoE 8 (53%) were started on a PPI. 3 patients failed to respond to a PPI were initiated on orodispersable budesonide (Jorveza®).

Local teaching to ED, acute medicine and Gastroenterology teams has been done to improve the management of acute FBO and EoE, and compliance to BSG guidelines.

52. Milk miRNA of women with IBD their relation to disease activity and treatment modality

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Introduction: Milk-derived extracellular vesicles (MDEVs) are nanovesicles carrying biological regulatory components such as microRNAs (miRNAs). MiRNA are small RNA that regulate gene expression. It is not very well known how IBD and its related various medications affect breast milk bioactive components. Studies show important changes in the levels of immune components in the breast milk of mothers with IBD, but there is no data revealing changes in miRNA expression within the milk of women with IBD. We are showed that

milk-miRNAs are influenced by maternal characteristics, such as maternal medication or time of delivery. The aim of this study is to determine the expression of highly expressed milk miRNA in IBD mothers.

Methods: Milk was collected from 30 mothers with IBD compared to 14 healthy controls during the first 3 months of lactation. Mothers with IBD were subdivided according to the medical treatment during their pregnancy and lactation. The majority of the mothers have received biological treatment (30% anti-TNFs and 30% others biological agents); 17% of the mothers were treated with aminosalicylates;10% with corticosteroids; 7% with immunomodulators and 6% of the mothers have not been treated during pregnancy or lactation. Expression of milk related miRNAs; miR-148a, miR-320, miR-21, Let-7a, miR-375 and miR-30, were analyzed by qRT-PCR.

Results: We quantified the expression of 6 selected miRNAs from 37 mothers with Crohn's disease (CD) and 18 healthy controls. We have found significant changes in the expression of several miRNAs: niR 30, miR 21a, and miR 148 in CD mothers, whilst the expression of mir 375, mir 320 and mir 26 were to those measured in healthy mothers. In addition, we have found significant change in the expression of miR 21a in mothers that did not receive biologic treatment. In contrast the expression of miR 320 is significantly changed in mothers treated with anti TNF compared to other biologic treatment

Discussion/Conclusion: The significant expression of selected beneficial miRNA in milk of mothers with IBD can lead to excessive stimulation or activation of the neonatal immune system. Additionally, these results may shed new light on the safety of IBD and IBD treatments for mothers and newborns during the breastfeeding period.

53. E-cadherin expression varies depending on the location within the primary tumor and is higher in colorectal cancer with lymphoid follicles

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Introduction: Reliable indicators of cancer advancement have actively been sought recently. The detection of colorectal cancer progression markers is essential in improving diagnostic and therapeutic protocols. The aim of the study was to investigate the profile of E-cadherin expression in colorectal cancer tissue depending on the TNM staging and its correlation with several clinical and histopathological features.

Methods: The study included 55 colorectal cancer patients admitted to the surgical ward for elective surgery. Tissue samples were obtained from resected specimens.

Results: Different distributions of E-cadherin expression within tumors were observed; the highest percentage of positive E-cadherin expression was found in the invasive front and in the tumor center. Additionally, the different cellular distribution of E-cadherin expression was noticed; weak membranous E-cadherin expression was the highest in the invasive front and in the budding sites, but a strong membranous pattern was most frequent in the tumor center. Various distributions of E-cadherin expression depending on cancer progression were also found; E-cadherin expression in node-positive patients was lower in the tumor center and in the tumor invasive front, whereas, in patients with distant metastases, the expression of E-cadherin was lower in the budding sites. In patients with higher TNM stages, E-cadherin expression was lower within the tumor (in the budding sites, tumor center, and invasive front). In tumors with lymphoid follicles, E-cadherin expression was higher in all local-

izations within the primary tumor. E-cadherin expression in the tumor center was also lower in tumors with some higher tumor budding parameters (areas of poorly differentiated components and poorly differentiated clusters). E-cadherin expression was found to be lower at the tumor center in younger individuals, at the budding sites in men, and at the surrounding lymph nodes in rectal tumors. Low E-cadherin expression appears to be a reliable indicator of higher cancer staging and progression. When assessing the advancement of cancer, apart from the TNM classification, it is beneficial to also consider the expression of E-cadherin. High tumor budding, the poverty of lymphoid follicles, and low E-cadherin expression analyzed simultaneously may contribute to a reliable assessment of colorectal cancer staging.

Discussion/Conclusion: These three histopathological features complement each other, and their investigation, together with conventional tumor staging and grading, may be very helpful in predicting the prognosis of colorectal cancer patients and qualifying them for the best treatment. The role of E-cadherin in the diagnosis and treatment of colorectal cancer, as a part of a personalized medicine strategy, still requires comprehensive, prospective clinical evaluations to precisely target the optimal therapies for the right patients at the right time.

54. Simultaneous analysis of tumor-infiltrating immune cells density, tumor budding status, and presence of lymphoid follicles in CRC tissue

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Colorectal cancer (CRC) affects more than 1,000,000 people worldwide each year. Recently, the number of young patients with early-onset colorectal cancer has increased, and right-sided colorectal cancer is still often diagnosed only in advanced stages. The TNM classification is not perfect for CRC staging. This study aimed to perform, for the first time, simultaneous analysis of tumor-infiltrating immune cell density, presence of lymphoid follicles, and budding status in CRC tissue. Intraoperative samples of neoplastic tissue were collected from 195 consecutive patients who were admitted to the surgical ward for elective colorectal surgery. Histological parameters were assessed in the tissue samples: tumor budding foci, poorly differentiated clusters and areas of poorly differentiated components. Tumor-infiltrating immune cells (tumor-associated neutrophils and tumor-infiltrating lymphocytes) were detected in five randomly chosen, areas at the tumor center and at the invasive front. Additionally, the presence of lymphoid follicles in CRC tissue was assessed. Tumor budding parameters were positively correlated with colorectal cancer advancement or histologic (mucinous) type of CRC. The number of poorly differentiated clusters was higher in younger patients. Lower densities of CD3 and CD4 lymphocytes were seen in CRC with a greater depth of tumor invasion. Lower densities of CD3 and CD8 lymphocytes were found in CRC with metastases to the surrounding lymph nodes. The lower density of CD8 lymphocytes was observed in CRC with distant metastases. Lower densities of tumor-associated neutrophils and tumor-infiltrating lymphocytes (CD3 and CD8) were revealed in CRC without lymphoid follicles. The number of lymphoid follicles was higher in patients with less advanced CRCs. Three histopathology markers, such as high tumor budding, scanty lymphocyte infiltration, and the poverty of lymphoid follicles, complement each other, appear to be reliable indicators of colorectal cancer progression, and could be useful in everyday medical practice, but their widespread use requires further research. We propose to take into account these markers, in the assessment of colorectal cancer advancement, in addition to the TNM classification.

55. An audit of the diagnosis, surveillance and treatment of premalignant conditions of the stomach in Cardiff & Vale

Lara Rowell (Cardiff, GB), Hasan Haboubi (Cardiff, GB)

Introduction: Gastric cancer (GC) is a poorly managed malignancy with approximately 6400 patients diagnosed each year in the UK. The low incidence of GC amongst the UK population has led to its significant underdiagnosis compared to countries of Eastern and Central Asia where it is more prevalent. Despite an increase in survival rates over the past 40-years, prognosis remains poor due to the late stage at which it is diagnosed. Where screening programmes are available (e.g. Far-East), GC is detected at earlier stages, increasing survival rates in these countries. This heterogeneity highlights the need for better endoscopic detection to improve outcomes.

Methods: In the UK, endoscopy is performed routinely to investigate patients who have symptoms of GI pathology. As part of this assessment, abnormal changes in gastric mucosa can be detected, including premalignant conditions such as gastric atrophy (GA), intestinal metaplasia (IM), polyps and dysplasia. The British Society of Gastroenterology (BSG) guidelines detail the best way to diagnose and manage these conditions. Our objective was to determine adherence to these guidelines in a University Hospital to enable endoscopists to benchmark their care against national guidance. A retrospective audit was undertaken for all gastric mapping procedures in 2022.

Results: A total of 106 patients were identified, in whom 70.8% (n = 75) of endoscopic procedures were appropriately managed in accordance to the BSG guidelines. Whilst endoscopic diagnostic accuracy was good (only 10–20%) below target, there still remained poor adherence to follow-up criteria of gastric atrophy, premalignant gastric polyps.

Discussion/Conclusion: The BSG guidelines have already identified that miss rates for GC are high as detection of precursor lesions such as GA and GIM are low. This audit confirms that the diagnostic standards of premalignant conditions in C&V are high, however follow-up and standards across the management of premalignant conditions are still not being met.

56. Risk factors for multiple potentially bleeding lesions in emergency upper gastrointestinal endoscopies

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Introduction: Gastrointestinal bleeding is one of the most important medical-surgical emergencies. Upper gastrointestinal bleeding (UGIB), defined as hemorrhage having its origin above Treitz' angle, is the most frequent type, and is suspected when the patient present with hematemesis and/or melena. Etiological diagnosis is vital for the patients' prognosis, and it relies mostly on upper gastrointestinal endoscopy (UGIE). However, endoscopy can show more than one bleeding or potentially bleeding lesion. The objective of our study was to analyze the frequency of multiple potentially bleeding lesions as seen in emergencies upper gastrointestinal endoscopies.

Methods: We performed a retrospective study on patients with acute UGIB presented in the Emergency Department of „St. Spiridon" Clinical County Hospital, investigated by UGIE, in the last six months; epidemiological, clinical and biologic data were recorded, as well as the results of UGIE. Furthermore, correlations between the presence of multiple potentially bleeding lesions and clinical and biological factors were made.

Results: 480 patients with suspected acute UGIB were investigated by emergency UGIE. The bleeding source was found in 375 (78%) patients; among them, 278 (58%) patients had one single bleeding lesion, while in 97 (14%) patients more than one potentially bleeding lesion was found. For the remaining 105 (22%) patients, no obvious causal lesion was found, and they were further investigated. The most frequent unique lesions were peptic ulcers and gastroesophageal varices, while the most encountered associations were Mallory-Weiss syndrome and peptic ulcer, and gastroesophageal varices and gastroduodenal ulcer. The factors correlated with the presence of multiple potentially bleeding lesions were: age, alcohol consumption, the presence of cirrhosis and Charleson comorbidity index.

Discussion/Conclusion: Even if in most cases UGIE is diagnostic for UGIB, there are cases when no lesions are found and also cases with more than one potentially bleeding lesion. Older age, the alcohol consumption, cirrhotic patients and the presence of comorbidities are associated with multiple potentially bleeding lesion. Thorough clinical examination and accurate endoscopic exam are mandatory for the right diagnosis and treatment, to ensure the most favorable patients' outcome.

57. Clinical, endoscopic and, pathohistological features of chronic gastritis associated with Helicobacter pylori on the background of type 2 diabetes mellitus

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Introduction: Patients with type 2 diabetes mellitus (DM) often develop lesions of the gastric mucosa (GM), which have their own characteristics of clinical symptoms, endoscopic and pathohistological characteristics. The aim is to investigate the clinical, endoscopic, and pathohistological features of the course of chronic gastritis (CG) in patients with type 2 DM depending on the presence of Helicobacter pylori (HP).

Methods: 64 patients with CG with concomitant type 2 DM were examined. The average age of the patients was 62.6 3 8.3 years, the ratio of women to men was 24 (37.5%)/40 (62.5%). The duration of the course of type 2 DM is 8.4 3 2.6 years. All patients underwent an upper endoscopy, with a biopsy of the GM with a histopathological examination. Patients with type 2 DM were divided into 2 groups: I (n = 46) – patients with CG associated with HP; II (n = 18) – patients with CG with a negative HP status. Clinical symptoms, endoscopic, and pathohistological characteristics of GM were assessed. Statistical data processing was performed.

Results: The following symptoms were observed more often in patients of group I compared to patients of group II: abdominal pain – in 60.8% (28/46) versus 33.3% (6/18) (X2 (2, n = 64) 3.93; p = 0.04717), nausea – 71.7% (33/46) versus 44.4% (8/18) (X2 (2, n = 64) 11.37; p = 0.00007), flatulence – 65.2% (30/46) versus 27.7% (5/18) (X2 (2, n = 64) 7.31; p = 0.00682). Depending on the HP status, no differences were found in the frequency of symptoms of heartburn, belching, vomiting, and feeling of early stomach fullness.

According to the data obtained during upper endoscopy, erosive gastropathy was detected in 39.1% (18/46) of patients of the I group and in 4.3% (2/18) of the patients of the II group (X2 (2, n = 64) 4.72; p = 0.002968).

According to the data obtained during pathohistological examination, the presence of HP infection led to a flattening of the surface topography of the GM (in patients of the I group compared to the II group, the depth of the gastric pits was 272.90 3 5.36 versus 313.00 3 9.10 Qm, the thickness of the GM was 453.10 3 10.79 vs. 479.00 3 16.53 Qm), the development of inflammatory infiltration of the lamina propria, destructive changes in the columnar epithelium of the GM with the phenomena of epithelial desquamation and hydropic dystrophy.

Discussion/Conclusion: The presence of HP infection contributes to the development of abdominal pain syndrome, nausea, bloating, and the formation of pronounced endoscopic and pathohistological changes of GM.

58. Use of incisional therapy in pediatric gastrointestinal endoscopic dilation

Mordechai Slae (Jerusalem, IL)

Introduction: Pediatric gastrointestinal (GI) luminal strictures are caused by a variety of conditions, such as inflammation, chemical injury, surgery, congenital malformations, and others. Pediatric GI strictures are not uncommon, and result in compromised elasticity of the narrowed GI organ, significant disruption of motility, or stiff obstruction. Treatment options include mainly different dilation techniques, and if failed, surgery. The main dilation method is by pneumatic balloon. Recently, incisional therapy, using an endoscopic diathermy knife, has been reported as an optional treatment for refractory esophageal strictures. However, there is very limited data and scarce reports on the use of this technique in pediatrics.

The most common endoscopic GI dilation technique is balloon dilation, where the balloon exerts 360 radial pressure equally on the GI walls. However, the stricture is often asymmetric, so that softer parts are dilated more by the balloon, while stiffer, more fibrotic parts, remain unchanged. Incisional therapy, using a diathermy system and an endoscopic knife, might have an advantage over balloon dilation since one can direct the therapy anatomically towards the most resistant parts. This will assumingly result in further reduction of focal stiffness, better dilation and improvement in local compliance. Moreover, in some cases the anatomy of the stricture (e.g., angles, the extent of obstruction, etc.) might limit the use of balloon. In this case, incisional therapy might be the only available endoscopic option. In this study, we aimed to assess the safety of incisional therapy in pediatric GI strictures.

Methods: The study is a retrospective cohort study. The local electronic medical record were searched for pediatric patients undergoing incisional therapy for GI strictures in the years 2019 to present (August 2023). Medical background and complications (including perforations, local infection, bleeding, fever, significant pain requiring more than basic analgesics, or admissions) were collected.

Results: Between the years 2019 and 2023, we identified 23 pediatric patients who underwent 87 endoscopic GI dilations by incisional therapy. Fourteen were males and 9 females. Mean age at the procedure was 5.5 years (median = 3 years, range < 1 to 23 years) and the youngest was 11 months old. Twelve patients had post tracheoesophageal fistula repair stricture, 5 had post-caustic ingestion strictures. Other etiologies included Epidermolysis Bullosa, Dyskeratosis Congenita, battery ingestion, graft versus host disease (post bone marrow transplant), congenital esophageal web, congenital duodenal web – one patient each. Most of the strictures were at the middle esophagus, others at upper or lower esophagus or duodenum. The average number of procedures per patient was 3.7 (median = 2, range 1–14). The following technique have been practiced - radial cuts at the narrowed area, using an endoscopic diathermy knife with the following settings: monopolar cutting mode, ERBE Endocut, I mode (=blended, predominantly cutting mode) set to effect 2, 3 sec intervals. The effect of the dilation has not been studied objectively; however all procedures have been reported effective (as a single step or part of multistep dilations) by the performing endoscopist. There were no complications in the 87 procedures.

Discussion/Conclusion: Endoscopic GI dilation by incisional therapy is safe in pediatric patients and offers an alternative endoscopic dilation technique. This study sets a basis for immediate optional use of this procedure, as well as for future studies on the efficacy of this technique, by establishing the safety potential of the procedure.

59. Multidisciplinary approach in eosinophilic oesophagitis care: How to improve diagnosis and management

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Introduction: Eosinophilic esophagitis (EoE) is a complex disease that often coexists with different conditions. Given the complexity of this pathology, a multidisciplinary approach, with gastroenterologist, allergist, dietitian, psychologist, and endoscopist may benefit to diagnosis and management of patients, reducing time to diagnosis as well.

Methods: The aim of the study is to evaluate impact of multidisciplinary team in diagnosis and management of eosinophilic esophagitis disease. A retrospective study was conducted to include all patients referred to Fondazione Policlinico Universitario A. Gemelli between September 2016 and July 2023. Prevalence of allergic, nutritional, and psychological disturbs was evaluated. Referral for each patient was reviewed. Diagnostic delay (time interval between first occurrence of EoE symptoms and confirmed diagnosis with endoscopy) was analyzed in patients with suspected eosinophilic esophagitis and diagnosis made in our center, compared to data reported in literature. Publications from 2014 to 2023 were reviewed.

Results: A total of 101 patients, 77 males and 24 females, with a mean age at diagnosis of 25 years, were included in the study. For all patients, each visit was conducted in team with gastroenterologist, allergist, dietitian, and psychologist. 85 patients presented allergic diseases (86%), 51 patients (52%) needed nutritional support by a dietitian and 66 patients (66%) presented psychological implication by the disease to necessitate clinical support. 53 patients (54%) were referred by team members. 14 patients (14%) presented to our center with suspect eosinophilic esophagitis. For these patients, ab initio evaluated with multidisciplinary approach, mean time to diagnosis was 2.25 months. Diagnostic delay reported in literature was 3 years.

Discussion/Conclusion: Multidisciplinary team is needed to manage patients with eosinophilic esophagitis because its several associated diseases. In fact, most of our patients presented allergic, nutritional, and psychological disturbs. This approach assures more appropriate medical management through shared decision making. Almost half of patients was referred by team members. Thank to awareness of each physician of the team and his early referral, we assisted in a reduction of diagnostic delay in our center compared to data reported in literature.

60. IL-3 stiffens CD4+ T cells and decreases in vivo homing to the inflamed colon

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Introduction: The pathogenesis of inflammatory bowel diseases (IBD) such as Crohn's disease (CD) and ulcerative colitis (UC) is still incompletely understood. However, despite having been described back in the 1980s and reported to be involved in other chronic inflammatory diseases such as arthritis, the role of interleukin 3 in the development and perpetuation of chronic intestinal inflammation is not fully understood. Here, we aimed to explore its role in experimental colitis.

Methods: We compared the development of T cell transfer colitis in Rag1-/- mice after transfer of naïve Il3-/- and Il3+/+ T cells and investigated the underlying homing mechanisms by immunofluorescence, flow cytometry and functional cell trafficking assays. The mechanical properties of Il3-/- and Il3+/+ T cells were determined by real-time deformability cytometry (RT-DC) and atomic force microscopy (AFM). Furthermore, in vivo homing assays and in vivo microscopy of Il3-proficient and -deficient T cells into the inflamed colon were performed.

Results: In vivo, experimental chronic colitis upon T cell transfer was exacerbated in the absence of IL-3 and a higher infiltration of CD4+ T cells in the inflamed gut of Rag1-/- mice after transfer of Il3-/- compared to Il3+/+ naïve T cells was observed. Intriguingly, while the expression of gut homing markers was similar on Il3-/- and Il3+/+ T cells, we found that IL-3 increased the mechanical stiffness of T cells and this was associated to reduced homing capacity into the inflamed colon mucosa.

Discussion/Conclusion: We uncover a crucial role of IL-3 in regulating mechano-biology and gut homing of CD4+ T cells. In consistence with previous data on IL3 receptor signalling this suggests that the IL-3 axis might be a novel target for future therapeutic approaches in IBD.

61. Immune response in patient with colorectal cancer

Konstancja Ustymowicz (Warsaw, PL), Adam Mantiuk (Warsaw, PL), Adrian Romanczyk (Bialystok, PL), Wiktoria Romanczyk (Bialystok, PL), Katarzyna Guzinska-Ustymowicz (Bialystok, PL), Marek Ustymowicz (Bialystok, PL)

Introduction: The immune response within colorectal cancer is widely studied and evaluated. The presence of lymphocytic infiltration in the main mass of the tumor and its front indicates a different clinical course of the disease. The aim of the study was to presence of CD3+ T lymphocyte infiltration in the tumor and its front in correlation with clinicopathological parameters.

Methods: The study included a group of patients operated on due to colorectal cancer. The histopathological results of the patients were analyzed, including the assessment of the expression of CD3 lymphocytes in the main mass of the tumor and its front, and an analysis of correlation with the patient's age, sex, histological malignancy stage, presence of metastases to lymph nodes and distant metastases was performed.

Results: We found the correlation between the differential infiltration from CD3+ T lymphocytes in the front of the invasion and the depth of tumor infiltration ($p = 0.008$). But we do not found the correlation between the expression of CD3 in the main tumor mass and expression CD3 of the invasion front and patient's age, sex, tumor location, histological type of the tumor, histological grade, the presence of metastases to lymph nodes and the presence of distant metastases.

Discussion/Conclusion: The obtained results suggest a relationship between the intensity of the CD3+ T lymphocyte infiltration in the front and the depth of the colorectal cancer infiltration.

62. An assessment of selected products of lipid peroxidation in patients with colorectal cancer and their diagnostic utility

Blanka Wolszczak-Biedrzycka (Olsztyn, PL), Justyna Dorf (Bialystok, PL), Jakub Wiktor Kosidlo (Bialystok, PL), Konrad Zareba (Bialystok, PL), Joanna Matowicka-Karna (Bialystok, PL), Olga Koper-Lenkiewicz (Bialystok, PL), Joanna Kaminska (Bialystok, PL), Anna Zalewska (Bialystok, PL), Mateusz Maciejczyk (Bialystok, PL)

Introduction: Colorectal cancer is a malignant neoplasm located in the colon, rectosigmoid junction, rectum and anus. Factor that may contribute to cancer development is oxidative stress. Disturbances of the balance between oxidants and antioxidants can lead to oxidative damage to DNA, proteins and lipids. One of the major products of lipid peroxidation is malondialdehyde (MDA), a reactive mutagenic compound.

The aim of my study was assessment MDA concentration in patients with colorectal cancer and comparison with a group of healthy people, assessment the correlation between the concentration of MDA and selected clinical and pathological parameters and the results of individual laboratory tests, as well as evaluation the diagnostic usefulness of MDA in patients with CRC.

Methods: The study included 50 patients treated surgically due to colorectal cancer in the 2nd Clinical Department of General and Gastroenterological Surgery at the Medical University of Bialystok Clinical Hospital in the years 2017–2019 and the control group consisted of 40 healthy people. The material for the study was venous blood collected in the fasting state, and the MDA concentration was determined using the enzyme immunoassay method – competitive ELISA.

Results: It has been shown that the concentration of MDA was about 2-fold higher in patients with colorectal cancer compared to the control group. Statistical analysis also showed a positive correlation between the concentration of MDA and pT stage, basophils and CRP concentration. This relationship indicated that the concentration of malondialdehyde increased with the increase of the mentioned above parameters. I also observed statistically significant differences in MDA concentration depending on the depth of tumor invasion (pT).

Discussion/Conclusion: In order to assess the diagnostic usefulness of MDA in patients with colorectal cancer, I performed an analysis of the ROC curve, which confirmed that malondialdehyde may be a valuable parameter in the diagnosis of CRC. Assessment of MDA concentration was also useful in differentiating the depth of primary tumor invasion (pT).

63. QingChangHuaShi granules induced-Tol-DC promoting Treg through TGF-β/Smad/Foxp3 signaling pathway for the treatment of ulcerative colitis

Kai Zheng (NanJing, CN), Jia Jia (NanJing, CN)

Introduction: QingChangHuaShi granules is a Chinese patent medicine used in the treatment of ulcerative colitis (UC). The preliminary study showed that QingChangHuaShi granules could induce tolerogenic dendritic cells (Tol-DC) to promote the differentiation of initial T cells to Treg and restore immune tolerance, thus treating UC. TGF-β/Smad signaling pathway is related to the differentiation of Treg. Foxp3 is a key factor in the development and function of Tregs. Therefore, it is important to study the relationship between Tol-DC promoting the differentiation of Treg and TGF-β/Smad/Foxp3, which is of profound significance to reveal the therapeutic mechanism of medicine update in UC.

Methods: The research group conducted in vitro studies on TGF-β/Smad/Foxp3 pathway inducing Treg differentiation and Smad7 blocking TGF-β/Smad/Foxp3 pathway inhibiting Treg differentiation. The effect of Tol-DC on TGF-β/Smad/Foxp3 pathway and Treg differentiation was observed in vitro experiments on T cells and in vivo experiments on IL-2-/- UC animal models.

Results: The results showed that CD4+ initial T cells could be induced by TGF-β, and Treg differentiation was induced by TGF-β/Smad/Foxp3 signaling pathway, and the level of Smad4 interacting with p-Smad2/3 was significantly increased after TGF-β treatment. The expres-

sion levels of p-Smad2, p-Smad3, Foxp3, IL-10 and Treg were significantly increased. However, the differentiation of initial CD4+ T cells with overexpression of Smad7 decreased, and the expressions of p-Smad2, p-Smad3, Foxp3, IL-10 and Treg decreased. QingchangHuashi granules induced Tol-DC can up-regulate the expression of p-Smad2, p-Smad3, Foxp3 and IL-10 in CD4+ T cells transfected with adenovirus overexpression of Smad7 and IL-2-/- mouse UC model, and increase the ratio of p-Smad2/Smad2 and p-Smad3/Smad3. When the proportion of Treg cells was increased, the p-Smad2/3 into the nucleus was increased after Tol-DC treatment. Meanwhile, the Tol-DC induced by QingchangHuashi granules and QingchangHuashi granules could significantly alleviate the colon injury of UC model and improve the pathological score of colon mucosa.

Discussion/Conclusion: The results confirmed that the Tol-DC induced by QingchangHuashi granules inhibited Smad7, which restored TGF-β phosphorylation in the downstream R-Smad (Smad2/3) in the initial T cells, then bound to Co-Smad (Smad4), and promoted the differentiation of Treg by transduction of Foxp3 after entering the nucleus. Reestablishment of immune tolerance through TGF-β/Smad/Foxp3 pathway for the treatment of UC.

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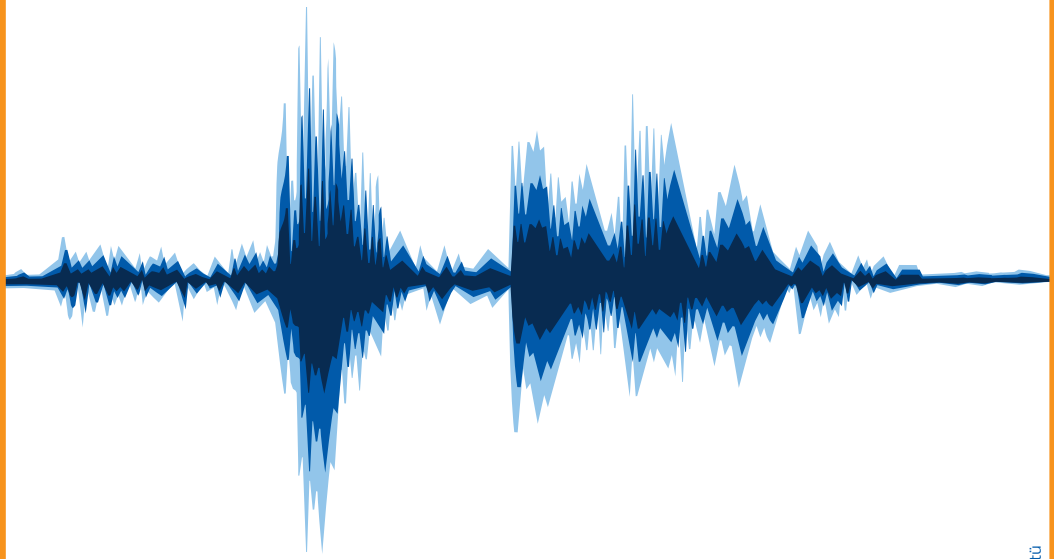

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