



Symposium 236 COPENHAGEN, DENMARK



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14,5 credit hours (CME) have been awarded by the European Union of Medical Specialists (UEMS).

PREFACE

Dear colleagues and friends,

It's our great pleasure and honor to invite you on behalf of Marianna Arvanitaki, John Gásdal Karstensen, Peter Vilmann and myself to a symposium in "ENDOSCOPY IN GI-ONCOLOGY: STANDARDS AND INNOVATIONS" in Copenhagen.

This gathering marks a pivotal moment in the intersection of different disciplines where advancements in endoscopic techniques and technologies have revolutionized our approach to the diagnosis, treatment, and management of gastrointestinal malignancies.

In recent years, endoscopy has emerged as a cornerstone in the multidisciplinary care of patients with GI cancers, offering precise visualization, targeted interventions, and minimally invasive alternatives. This symposium serves as a platform to delve into the latest standards of practice and explore the forefront of innovations shaping the future of GI-oncology.

We will start on Friday with new insights and developments in screening and surveillance of upper and lower GI neoplasia. Followed by sessions how to manage early GI neoplasia.

The second part of the symposium deals with hepato-pancreatobiliary (pre-) malignant diseases and each session starts with interactive case presentations.

A highlight will also be the live endoscopy transmission from the University Hospital Augsburg and Karolinska Hospital with special cases in GI neoplasia demonstrated by experts in these fields.

We commend Falk Foundation for their vision in convening this symposium and extend our gratitude to all participants for their contributions to this collective endeavor. May our deliberations inspire new ideas, ignite transformative initiatives, and ultimately, pave the way for a brighter future in the fight against GI cancers.

With great anticipation and enthusiasm, we wish you all a productive and enlightening symposium.

Warm regards

Helmut Messmann on behalf of the scientific organizers Marianna Arvanitaki, John Gásdal Karstensen and Peter Vilmann

SYMPOSIUM 236 - ENDOSCOPY IN GI-ONCOLOGY: STANDARDS AND INNOVATIONS

March 15-16, 2024

Scientific Organization:

Prof. Dr. Marianna Arvanitaki, Brussels (Belgium) Prof. Dr. John Gásdal Karstensen, Copenhagen (Denmark) Prof. Dr. Helmut Messmann, Augsburg (Germany) Prof. Dr. Peter Vilmann, Copenhagen (Denmark)

Congress Venue:

Tivoli Hotel & Congress Center Arni Magnussons Gade 2 1577 Copenhagen Denmark

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, March 14, 2024 08:00 – 19:00 h at the congress office

Friday, March 15, 2024

08:45 Welcome

Marianna Arvanitaki, Brussels; John Gásdal Karstensen, Copenhagen; Helmut Messmann, Augsburg; Peter Vilmann, Copenhagen

SESSION I

Upper GI-screening and surveillance

Chairs: Raf Bisschops, Leuven; Tsuneo Oyama, Nagano

- **09:00** Risk factors and epidemiology for upper GI-cancer Jakob Linseisen, Augsburg
- **09:15** Can an upper GI-screening be cost effective? *Prateek Sharma, Kansas City*
- **09:30** Barrett's esophagus finding the needle in the haystack *Alanna Ebigbo, Augsburg*
- **09:45** Surveillance and management of "high-risk stomach" *Akiko Takahashi, Nagano*

10:00 Discussion

SESSION II

10:15 Live endoscopy (Stockholm and Augsburg)

 Chairs: Marianna Arvanitaki, Brussels; Mouen A. Khashab, Baltimore; Matthias Löhr, Stockholm; Helmut Messmann, Augsburg; David Roser, Augsburg
 Physicians Augsburg: Andreas Probst, Karel Caca
 Stockholm: Mari Hult, Fredrik Swahn, Alexander Waldthaler

11:15 Coffee break with live transmission

SESSION III

11:45 Live endoscopy (Stockholm and Augsburg)

 Chairs: Matthias Löhr, Stockholm; Helmut Messmann, Augsburg; David Roser, Augsburg; Peter Vilmann, Copenhagen; George Webster, London
 Physicians Augsburg: Andreas Probst, Sandra Nagl
 Stockholm: Mari Hult, Fredrik Swahn, Alexander Waldthaler

13:00 Lunch break

SESSION IV

Colon cancer screening and surveillance

Chairs: Monika Ferlitsch, Vienna; Alanna Ebigbo, Augsburg

- **13:45** When to start and when to stop? *Evelien Dekker, Amsterdam*
- 14:00 FIT, colonoscopy, liquid biopsy... Michal Kaminski, Warsaw
- 14:15 How to improve ADR? Is AI the solution? *Cesare Hassan, Milan*
- 14:30 Surveillance in IBD: Less is more? Marietta lacucci, Cork
- 14:45 Discussion

SESSION V

Endoscopic management of upper GI neoplasia (Part I)

Chairs: Alanna Ebigbo, Augsburg; Prateek Sharma, Kansas City

- **15:00** Ablation, kryo, hybrid APC,... *Raf Bisschops, Leuven*
- **15:15** EMR or ESD in Barrett cancer: The never ending story *Helmut Messmann, Augsburg*
- **15:30** SCC and radio-chemotherapy the new solution after non-curative resection *Tsuneo Oyama, Nagano*
- **15:45** T1b cancer in Barrett endoscopy is still an option! *Man Wai Chan, Amsterdam*
- 16:00 Discussion
- 16:15 Coffee break with poster session

Friday, March 15, 2024

SESSION VI

Endoscopic management of upper GI neoplasia (Part II)

Chairs: Helmut Messmann, Augsburg; Tsuneo Oyama, Nagano

- **16:45** Expanded criteria in gastric cancer how far can we go? *Tsuneo Oyama, Nagano*
- **17:00** When should we think about LECS? *Naohisa Yahagi, Tokyo*
- 17:15 Management of duodenal and ampullary lesions *Helmut Messmann, Augsburg*
- 17:30 Neuroendocrine tumors surveillance, endoscopic resection or surgery? *Thomas Rösch, Hamburg*

17:45 Discussion

Saturday, March 16, 2024

SESSION VII

Endoscopic management of lower GI neoplasia

Chairs: Ian Gralnek, Afula; Naohisa Yahagi, Tokyo

- **08:00** Which classification is best for treatment decision? *Monika Ferlitsch, Vienna*
- **08:15** Low and high risk criteria? Time to redefine? *Tine Plato Kuhlmann, Herlev*
- **08:30** When EMR? When ESD? Sandra Nagl, Augsburg
- **08:45** Management of T1b cancer in the rectum Leon Moons, Utrecht
- **09:00** The role of endoscopic fullthickness resection in the colorectum *Arthur Schmidt, Stuttgart*
- **09:15** Discussion
- 09:30 Coffee break

SESSION VIII

Hepatobiliar (pre-)neoplasia

Chairs: John Gásdal Karstensen, Copenhagen; Peter Vilmann, Copenhagen

10:00	Case- PSC Henriette Ytting, Hvidovre	
10:15	Risk factors of hepatobiliary carcinoma in PSC Cyriel Y. Ponsioen, Amsterdam	
10:30	The role of radiology - MR vs. PET Caroline Ewertsen, Copenhagen	
10:45	The role of endoscopy Marianna Arvanitaki, Brussels	

11:00 Discussion

Saturday, March 16, 2024

SESSION IX

Malignant bile duct stricture

Chairs: Lars Aabakken, Oslo; Marianna Arvanitaki, Brussels

11:15	Case - Klatskin Bojan Kovacevic, Copenhagen			
11:30	How to diagnose? Urban Arnelo, Umeå			
11:45	Preoperative drainage - update Lars Aabakken, Oslo			
12:00	Palliative treatment – just stent or more? George Webster, London			
12:15	The role of surgery Kristian Kiim, Copenhagen			
12:30	Discussion			
12:45	Presentation of Poster Awards			
13:05	Lunch break with poster session			
SESSION X				
Cystic pancreatic lesion				

Chairs: Ulrike Denzer, Gießen; Peter Vilmann, Copenhagen

14:00	How to perform surveillance?
	Peter Vilmann, Copenhagen

- 14:15 New methods of tissue sampling *Tomáš Hucl, Prague*
- **14:30** The role of AI in differentiation of cystic lesions Dominik Schulz, Augsburg

14:45	The role of PET scan in pancreatic lesions Constantin Lapa, Augsburg
15:00	Endoscopic treatment with RFA? Stephen Pereira, London
15:15	Which lesions need drainage, and how? John Gásdal Karstensen, Copenhagen

- 15:30 Discussion
- 15:45 Coffee break with poster session

SESSION XI

Pancreatic mass

Chairs: Tomáš Hucl, Prague; Shyam S. Varadharajulu, Orlando

- **16:15** Pre-operative drainage: How and when *Ulrike Denzer, Gießen*
- **16:30** EUS guided tissue sampling vs. pancreatico-/cholangioscopy *Claudio Giovanni De Angelis, Turin*
- **16:45** EUS guided RFA of pancreatic NET Stefano Francesco Crinò, Verona
- **17:00** Malignant gastric outlet obstruction is EUS-guided gastroenterostomy the new gold standard? *Mouen A. Khashab, Baltimore*
- 17:15 EUS-guided bile duct/gallbladder drainage update Shyam S. Varadharajulu, Orlando
- 17:30 Discussion

State of the art

- Chair: Helmut Messmann, Augsburg
- 17:45 Endoscopy in 10 years what can we expect? Ian Gralnek, Afula

LIST OF SPEAKERS, MODERATORS AND SCIENTIFIC ORGANIZERS

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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 236 Students (copy of student ID required) EUR 300 EUR 150

The congress fees include:

- Pre-Opening and Welcome on Thursday, March 14, 2024, 19 h
- Refreshments during coffee breaks
- Lunch on Friday, March 15 and on Saturday, March 16, 2024
- A copy of the final program

CONGRESS OFFICE AND REGISTRATION

Opening Hours:

Thursday, March 14 Friday, March 15 Saturday, March 16 08:00 - 19:00 h 08:00 - 18:00 h 07:30 - 18:00 h

The Falk Foundation will take pictures during the meeting. Additionally, parts of the meeting might be recorded. By participating all attendees consent and agree with the recording and the photo shoots.



From Copenhagen Airport

You can take the train direct from Copenhagen Airport Terminal 3 on track 2 to Copenhagen. Get off at Copenhagen Central Station and walk to the hotel, which is within 8-10 minutes walking distance.

You can also get a train on tracks 11 and 12 at Central Station that will take you to Dybbølsbro Station. Tickets from the airport to Copenhagen Central Station are also valid on the bus, metro and S-train.

Taking a taxi from the airport will cost approx. DKK 280. All taxis are metered and accept all major international credit cards.

Parking

At Tivoli Hotel & Congress Center there is a big, video-monitored carpark in the building with space for 500 vehicles. The parking spaces are available on a first-come-first-served basis - please note that the carpark is for public use so it is not possible for us to book a space for you in advance. Prices: Per day DKK 235, per hour DKK 55.

CONFLICTS OF INTEREST

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

Marianna Arvanitaki: Olympus, Pentax

John Gásdal Karstensen: Ambu, Boston Scientific, SNIPR Biome, Norgean

Helmut Messmann: Olympus, Satisfai, Dr. Falk Pharma, IPSEN, Erbe, Ambu, Boston Scientific, Covidien, Takeda

Peter Vilmann: Mediglobe GmbH

POSTER ABSTRACTS

- The role of 2D share wave elastography at hepatic and splenic level for predicting the degree of gastroesophageal varices in patients with liver cirrhosis
 A. Musa, M. Musa, C.G. Tieranu, M. Ionescu, A.O. Olteanu, A. Saftoiu (Bucharest, RO)
- The effect of metabolic dysfunction-associated steatotic liver disease (MASLD) on the severity of coronary artery disease (CAD)
 M. Alsenbesy, H. Ismail, M. Tag-eldeen, A. Abdulmaseh (Manama, BH; Qena, EG)
- 3. The role of IL-23-positive immune cells and IMP3 expression in development of HER2-negative gastric cancers

Y. Ananiev, R. Tenev, K. Ivanova, M. Hadzhi (Stara Zagora, BG)

- 4. Increasing incidence of colorectal serrated lesions and polyps in the Danish population M. Andrea, R. Jepsen, T. Kuhlmann (Herlev, DK)
- Preliminary results from the OneScope-II study: A randomized controlled single-center trial comparing single-use and reusable gastroscopes in patients with clinical signs of upper gastrointestinal bleeding
 M. Ayoub, C. Roemmele, V. Tadic, K. Riedl, J. Schlottmann, M. Scheppach, D. Schulz, N. Aehling, D. Roser, L. Birzle, A. Muzalyova, S. Nagl, A. Probst, H. Messmann, A. Ebigbo (Augsburg, DE)
- 6. Long-term follow-up results of patients with hepatitis C RNA positive in DAA era M. Basaranoglu, A. Valiyeva, B. Sumbul (Istanbul, TR)
- Could the total oxidative status (TOS) be a potential diagnostic biomarker in gastric cancer?
 G. Biedrzycki, B. Wolszczak-Biedrzycka, J. Dorf, J. Matowicka-Karna, O. Koper-Lenkiewicz, J. Kaminska, K. Zareba, A. Zalewska, M. Maciejczyk, A. Pryczynicz (Olsztyn, Bialystok, PL)
- Computer-aided quality assessment of endoscopist competence during colonoscopy – A systematic review K. Mazanti Cold, A. Vamadevan, M. Svendsen, A. Vilmann, L. Konge, F. Bjerrum (Copen-hagen, DK)
- 9. Post-gastroscopy UGI cancer A 10-year single centre case series J. Cooney, P. Appiahene, A. Wolak, H. Chong, J. Hayat (London, GB)
- The relative significance of individual risk factors in development of the colorectal carcinoma
 A. Genunche-Dumitrescu, C.D. Neagoe, C.D. Badea, R. Surugiu, A. Ilie, C. Deliu, A.A. Badea (Craiova, Bals, Bucharest, RO)
- The risk of development of gastric cancer in patients with precancerous changes after Helicobacter pylori eradication
 A. Genunche-Dumitrescu, C.D. Neagoe, C.D. Badea, R. Surugiu, A. Voineseanu, M. Badea, A.A. Badea (Craiova, Bucharest, RO)
- Colorectal cancer in 17-year-old girl K. Guzinska-Ustymowicz, K. Ustymowicz, A. Pryczynicz, W. Romanczyk (Bialystok, Warsaw, PL)
- Various distributions of E-cadherin expression depending on CRC progression K. Guzinska-Ustymowicz, K. Ustymowicz, A. Pryczynicz, W. Romanczyk (Bialystok, Warsaw, PL)

- Cons and pros for use of photodynamic technique for an early endoscopic diagnosis of colonic neoplasia

 Hryhorchuk, L. Sydorchuk, R. Sydorchuk, V. Stepan, A. Sydorchuk, Ir. Sydorchuk, R. Knut, Ig. Sydorchuk (Chernivtsi, UA; Neu-Ulm, Siegen, DE)
- 15. Detection of abnormalities in KRAS and NRAS genes in serrated lesions of the colon K. Jakubowska, K. Lomperta, J. Cylwik, M. Koda, L. Kanczuga-Koda (Bialystok, Warsaw, PL)
- The efficacy of immediate second-look endoscopy for the prevention of post-endoscopic submucosal dissection of the gastric neoplasms
 J. Kim (Goyang, KR)
- Concomitant neuroendocrine tumor and colorectal cancer: A rare clinical case presentation
 E. Nikolovska Trpchevska, M. Genadieva Dimitrova, M. Trajkovska, G. Deriban,
 B. Todorovska, D. Nikolova, A. Karadzova, M. Miloshevski (Skopje, MK)
- The value of developing a regional Specialist Hepatology Nurse network K. Snowden, D. Orange, D. Backhouse (Keighley, York, Hull, GB)
- Conclusion on substantiating the need for a modern method of differential diagnosis of colon tissues during colonoscopy
 V. Sulyma, V. Gaponov, O. Sulima (Dnipro, UA)
- 20. Endoscopic assessment of mucosal changes: Diagnostic value and accuracy of standard colonoscopy, narrow-band imaging, and polarized confocal microscopy of colon

A. Sydorchuk, R. Knut, R. Sydorchuk, L. Sydorchuk, I. Hryhorchuk, Ig. Sydorchuk, O. Khomko, O. Sydorchuk (Neu-Ulm, DE; Chernivtsi, Kyiv, UA)

- Study of an endoscopic radiofrequency ablation use for early esophageal squamous cell neoplasia
 L. Sydorchuk, R. Knut, R. Sydorchuk, A. Sydorchuk, I. Hryhorchuk, Ig. Sydorchuk, O. Plehutsa, O. Sydorchuk, Ir. Sydorchuk (Chernivtsi, Kviv, UA: Neu-Ulm, Siegen, DE)
- Comparing different types of endoscopy for lower GI cancer screening
 R. Sydorchuk, O. Plehutsa, L. Sydorchuk, A. Sydorchuk, P. Kyfiak, Ig. Sydorchuk,
 I. Hryhorchuk, Ir. Sydorchuk, O. Sydorchuk (Chernivtsi, Kyiv, UA; Neu-Ulm, Siegen, DE)
- Glutathione peroxidase (GPx) a potential biomarker to screening and diagnosis patients with gastric cancer
 B. Wolszczak-Biedrzycka, J. Dorf, K. Zareba, J. Matowicka-Karna, O. Koper-Lenkiewicz, J. Kaminska, A. Zalewska, M. Maciejczyk, A. Pryczynicz (Olsztyn, Bialystok, PL)
- Endoscopic resection of upper gastrointestinal subepithelial tumours: Our clinical experience
 Yener (Istanbul, TR)

FULL CONTENT OF POSTER ABSTRACTS

Poster Numbers 1 - 24

1. The role of 2D share wave elastography at hepatic and splenic level for predicting the degree of gastroesophageal varices in patients with liver cirrhosis

Adelina Musa (Bucharest, RO), Mihai Musa (Bucharest, RO), Cristian George Tieranu (Bucharest, RO), Mirela Ionescu (Bucharest, RO), Andrei Ovidiu Olteanu (Bucharest, RO), Adrian Saftoiu (Bucharest, RO)

Introduction: Among the non-invasive methods of evaluation in cirrhotic patients, shear wave elastography (2D-SWE) method has been used to quantify the stiffness in chronic liver diseases with good accuracy. Several studies have shown that each complication of cirrhosis is associated with a certain amount of liver stiffness. The objective of the study was to quantify the use of elastography (liver and spleen) in predicting the risk and the grade of gastroesophageal varices in patients diagnosed with hepatic cirrhosis.

Methods: We used the GE LogiqE9/E10 ultrasound system for 34 patients. We excluded the patients with liver neoplasia, infiltrative liver disease, acute viral hepatitis and obstructive cholestasis. The cut-off value used for liver stiffness was > 11.88 kPa (> 1.99 m/s), correspondent to F4 Metavir. The procedure was performed after 4 hours of fasting, with an intercostal approach at 1.5-2 cm below liver and spleen capsule, avoiding major vessels. Six measurements were obtained for each patient. The results were compared with the degree of esophageal varices assessed by upper digestive endoscopy.

Results: We performed liver elastography for 34 patients known with liver cirrhosis, 94.2% due to ethanol consumption, of which 29.4% (n = 10) were female and 70.5% (n = 24) were male. We compared the degree of esophageal varices with the value of elastography. Elastography can differentiate patients without esophageal varices from patients with moderate (p value = 0.072) or large esophageal varices (p value = 0.013), but it cannot differentiate between patients without esophageal varices and those with small esophageal varices (p value = 0.8249). However, there was a lack of correlation between the elastography values of the spleen and the degree of esophageal varices (p value = 0.5860).

Discussion/Conclusion: The results obtained are indicating that 2D-SWE of the liver can be used for ruling-out varices needing treatment in patients with compensated ACLD (cACLD), knowing that the presence of varices and especially of varices needing treatment indicates distinct prognostic stages in patients with cACLD.

2. The effect of metabolic dysfunction-associated steatotic liver disease (MASLD) on the severity of coronary artery disease (CAD)

Mohamed Alsenbesy (Manama, BH), Hossam Ismail (Qena, EG), Mohamed Tag-eldeen (Qena, EG), Albair Abdulmaseh (Qena, EG)

Introduction: Non-alcoholic fatty liver disease (NAFLD) is now called metabolic dysfunction-associated steatotic liver disease (MASLD). This nomenclature reflects the association with metabolic disorders and its relation to risk of developing coronary artery disease (CAD). Gensini score (GS) is a widely used angiographic scoring system for quantifying the severity of CAD. In addition, transient elastography with controlled attenuation parameter (CAP) is an appropriate alternative to liver biopsy in diagnosing and defining steatosis.

Methods: A prospective study involved 100 patients who underwent coronary catheterization and had proven CAD. All patients were subjected to abdominal ultrasonography (US) and transient elastography (TE) with controlled attenuation parameter (CAP) score to detect the grade of steatosis. Data were analyzed using a Statistical Program for Social Science (SPSS) version 18.0.

Results: A total of 100 patient, with mean age of 47.9 3 8.4 years, 70% were males, 70% diabetics and 64% hypertensives. According to the initial US screening, there were 42 patients (42%) with bright echo pattern and considered as MASLD. As regard the CAP score of steatosis, there were 12 patients (12%) of S0, 38 patients (38%) of S1, 22 patients (22%) of S2 and 28 patients (28%) of S3. The mean of Genseni score was 50.9. There was highly statistically significant correlation (p-value < 0.001) between degree of steatosis and Genseni score in studied patients, the mean of Gensini score was 10.5, 21.7, 57.6 and 102.6 in Grade S0, S1, S2 and S3 respectively.

Discussion/Conclusion: The ultrasound was not able to detect early steatosis (S1). In addition, the present study showed a Statistically significant correlation between CAD severity and CAP score of steatosis. further studies to correlate these findings with the degree of liver fibrosis is highly recommended.

3. The role of IL-23-positive immune cells and IMP3 expression in development of HER2-negative gastric cancers

Yulian Ananiev (Stara Zagora, BG), Rumen Tenev (Stara Zagora, BG), Koni Ivanova (Stara Zagora, BG), Mehmed Hadzhi (Stara Zagora, BG)

Introduction: Currently, gastric cancer (GC) is the fourth worldwide cancer types. The aim of our study was to investigate the expression of insulin-like growth factor II mRNA-binding protein 3 (IMP3) and density of IL-23-positive dendritic cells in group of HER2-negative specimens.

Methods: The immunohistochemical expression of HER2, IMP3 and distribution of IL-23-possitive cells was evaluated in 40 patients with GC. Data compared with clinical and pathological parameters of investigated patients.

Results: Our results showed that all cases were negative for HER2 marker, and 12 cases had positivity for IMP3. After analysis we found that in the tumour stroma and border IL-23-positive cells were dispersed with variable density. Low grade GCs IL-23-positive immune cells in tumour stroma were lower in number for IMP3 positive cases compared to IMP3 negative tumours (2.44 3 3.93 vs. 11.6 3 19.1 cells/mm2, p = 0.033, Mann-Whitney U test). In addition, T1-T2 GCs had more IL-23-postive cells in number compared with T3-T4 tumors (6.67 3 11.1 vs. 1.41 3 4.03 cells/mm2, p = 0.001, Mann-Whitney U test). Finally, patients with IMP3 positive status had shorter survival then IMP3-negative GCs cases.

Discussion/Conclusion: This study is evaluating expression of HER2, IMP3 and IL-23 in patients with GC, in order to identify the relation between these biomarkers and progression of disease. Our results suggest that IL-23-positive immune cells and play an important role in antitumor immune reaction and could be regulated by IMP3 protein.

4. Increasing incidence of colorectal serrated lesions and polyps in the Danish population

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Introduction: Colorectal serrated lesions and polyps (SP) include hyperplastic polyps (HP), sessile serrated lesions 3 dysplasia (SSL/SSL-D), and traditional serrated adenomas (TSA). 20–30% of colorectal adenocarcinomas develop from SP. We present incidence and baseline characteristics of SP in the Danish population.

Methods: We used The Danish Pathology Registry to include all SP in the Danish population from January 1st, 2000 to December 31st, 2021. Based on the unique Danish personal identification number and SNOMED-codes, combined with the age and sex of patients, and date of surgery, we determined the incidence of the SP subtypes, anatomical location, and changes over time.

Results: In the period 2000–2021, a total of 292,761 SP were removed from 163,949 patients: SSL: 50,702, SSL-D: 5959, HP: 224,860, TSA: 10,293. The median age was 64.1 years [55.2–71.6] and 53.3% were male. We found a general increase of SP from 2804 in 2000 to 25,846 in 2021. The proportion of SSL increased from 1.1% (81) in 2006 to 38% (9891) in 2021. HP and TSA were most frequent in the rectum and the sigmoid colon, while SSL and SSL-D occurred most often in the ascending colon and the sigmoid colon, followed by the remaining parts of the right colon.

Discussion/Conclusion: During the study period 2000–2021, we find an increasing number of SP, especially SSL. From 2019–2021 the number of SP seem to stabilize, while the proportion of SSL keeps rising. Essential factors most likely influencing the number of SP are the introduction of the Danish National Colorectal Cancer Screening Program in 2014, focus on identifying and removing SP, better endoscopic equipment, and the new WHO classification of SP in 2019. This study will form the basis for future studies on SP as an important precursor of colorectal cancer.

5. Preliminary results from the OneScope-II study: A randomized controlled single-center trial comparing single-use and reusable gastroscopes in patients with clinical signs of upper gastrointestinal bleeding

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Introduction: The use of disposable equipment and accessories in gastrointestinal endoscopy has increased significantly over the past decade. The first single-use gastroscope (Ambu® aScopeTM Gastro) was approved for clinical use in April 2022. A possible niche could be its use in emergency procedures, however the diagnostic and therapeutic performance remains unclear. We aimed to compare single-use with reusable gastroscopes in patients presenting with clinical stigmata of upper gastrointestinal bleeding.

Methods: The OnceScope-II trial is an ongoing, prospective, randomized controlled single-center interventional study. Patients recruited between March and November 2023 were included in this interim analysis. The primary outcome was defined as reaching the descending duodenum and the adequate assessment for the presence of a bleeding site. The secondary outcome included successful hemostasis at index endoscopy.

Results: 92 patients (58 male/34 female) with a mean age of 69.5 years were included. The average Glasgow-Blatchford-score was 11.9 (min. 2; max. 21). 51% (47/92) of procedures were performed with a single-use gastroscope; 49% (45/92) were done with a reusable gastrocope. The primary aim of adequate assessment for the presence of a bleeding site was achieved in all patients (100%). In 46 patients (50%), an endoscopic intervention of the bleeding site was indicated. Successful hemostasis was achieved in 100% (24/24) of patients in the reusable group, and in 86% (19/22) of the single-use interventions. The three unsucessful interventions were all performed in the duodenal bulb.

Discussion/Conclusion: The interim analysis demonstrated an adequate diagnostic and therapeutic performance of single-use gastroscopes in patients presenting with clinical signs of bleeding. Single-use endoscopes might be inferior in a prone position at the duodenal bulb for endoscopic intervention. In the final analysis, follow up data, statistical analysis and further secondary endpoints will be reported.

6. Long-term follow-up results of patients with hepatitis C RNA positive in DAA era

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Introduction: Hepatitis C virus (HCV) is still one of the main reasons of hepatic injury- related death. Direct-acting antiviral (DAA) medications for hepatitis C is a new era in hepatology. In this study, we aimed to show long term follow-up results of Hep C RNA (+) patients in DAA era.

Methods: This study included patients with positive HCV RNA (2014-2020) among blood donors. The data was taken from our hospital's registration system. Final outcome, MELD score, developing any other chronic disease, mortality, persistent viral response rate were evaluated for each patient with Hep C RNA + during the follow-up.

Results: Of the 2560 patients with anti-HCV positive, we found that 99 patients had HCV RNA positive and 62.6% (n = 62) were female. The mean age of the cases at the diagnosis was 57.86 3 14.17. Of the 99 patients with HCV RNA +, 74 patients (74.7%) had antiviral treatments and virologic negative rate was 94.5% (74/70) after the treatment. Patients developed cirrhosis in 27.7% and HCC in 5% at the end of follow-up. The mortality rate in HCV RNA positive was determined to be statistically significant levels higher than in HCV RNA negative (40% vs. 6.8%, p = 0.001). Moreover, MELD score was higher in patients with HCV RNA + than in HepC negatives (p = 0.038). Despite some conflicting reports, there was no difference among the patients with HCV RNA positive vs negatives for developing any chronic disease frequency in this study. Spontaneous clearance rate is 4.1% in untreated patients.

Discussion/Conclusion: Mortality rates are higher in non-treated hepatitis C patients. Moreover, MELD score is higher in those patients than treated patients. So, we desperately need to treat all patients with Hep C infection.

7. Could the total oxidative status (TOS) be a potential diagnostic biomarker in gastric cancer?

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Introduction: All over the world, gastric cancer is the 5th-leading type of cancer and the 3rd-leading cause of death from cancer. About 95% of all gastric cancer cases are diagnosed in patients over 40 years old but in recent years a considerable increase in the incidence in the group of young people under 40 years of age was observed. Therefore, scientists focus on risk factors and mechanisms participating in gastric cancer development especially in the young. It is well known that gastric carcinogenesis is connected with Helicobacter pylori infection, lifestyle, psychosocial environment, socioeconomic status, and dietary habit. Lifestyle and dietary habits like stress, smoking, drinking alcohol and high-fat or high-carbohy-drate diets may also be responsible for the overproduction of reactive oxygen species (ROS) which leads to the development of oxidative stress in the case of an ineffective antioxidant barrier. The aim of our study was to evaluate the redox status according to TOS level in gastric cancer patients. We are also the first to assess the diagnostic utility of TOS in GC patients according to histopathological classifications (TNM, Lauren's and Goseki's classification) and histopathological parameters such as histological type, histological differentiation grade as well as presence of vascular or neural infiltration and desmoplasia.

Methods: 50 patients with gastric cancer and 50 healthy controls matched for sex and age were included in the study. TOS level was determined using the colorimetric method by measuring the oxidation of ferrous ion to ferric ion in the presence of oxidants in a sample.

Results: Level of TOS (p < 0.0001) was significantly higher in GC patients compared to the healthy control. ROC analysis was performed to assess the diagnostic value of TOS in the diagnostics of gastric cancer. We demonstrated that TOS differentiate GC patients from healthy controls, to a large extent. We showed that TOS proved to be helpful in differentiation moderately differentiated (G2) from poorly differentiated tumours (G3) (AUC for TOS = 0.7464). We also demonstrated a very high diagnostic value of TOS (AUC = 0.7451) in differentiating the groups of patients with gastric cancer at stage pT1+pT2 of tumour invasion from patients with stage pT3+pT4 and for differentiation of patients with lymph node metastasis (AUC = 0.7964). Also, TOS (AUC = 0.7105) proved to be helpful in differentiation patients with present and absent distant metastasis.

Discussion/Conclusion: TOS may can be a potential diagnostic indicator of gastric cancer advancement.

8. Computer-aided quality assessment of endoscopist competence during colonoscopy – A systematic review

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Introduction: Large variations in adenoma detection rate can potentially by limited by Computer-aided quality assessment (CAQ) that automatically assess competence of single colonoscopies. The aim of this study is to systematically review the evidence for CAQ systems.

Methods: A systematic review of the literature was done using MEDLINE, EMBASE, and SCOPUS based on three blocks of terms based on the inclusion criteria: automatic evaluation, competence assessment, and colonoscopy. Exclusion criteria: conference abstracts and articles not in English. Articles were systematically reviewed by two reviewers, first by abstract and then in full text. All included articles' methodological aspects were assessed using the Medical Education Research Study Quality Instrument (MERSQI).

Results: We identified 12,413 studies. 6662 remained after removal of duplicates, and 13 studies were included for final analysis. Five categories of CAQ systems were identified: With-

drawal speedometer (seven studies), Scope movement analysis (three studies), Effective withdrawal time (one study), Fold examination quality (one study), and Visual gaze pattern (one study). The methodological quality of the studies was high (mean MERSQI 15.2 points, maximum 18 points). Withdrawal speedometer was the only CAQ system tested by implementation, with five studies evaluating its feedback to change in ADR.

Discussion/Conclusion: Thirteen studies examined the development of or tested CAQ systems, most frequently by correlating it to ADR. Withdrawal speedometer was the only CAQ method tested by implementation, with three studies detecting an improvement in ADR and two studies that did not. Larger multicenter studies are warranted to test the generalizability of improvement in ADR.

9. Post-gastroscopy UGI cancer - A 10-year single centre case series

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Introduction: UGI cancer detected within 5 years of a gastroscopy (termed post-OGD UGI cancer – POUGIC) may reflect delayed diagnosis and contribute to poorer prognosis. It has been estimated to be as high as 14% and BSG quality standards (2017) recommend rates do not exceed 10%. UGI cancer often presents late and with limited curative treatment options efforts are increasingly focused on improved screening methods and earlier diagnosis. We undertook a retrospective review of all histological diagnoses of oesophageal and gastric carcinoma at our hospital over a 10-year period to describe this cohort in our own practice.

Methods: Medical records for 588 histological diagnoses of gastric and oesophageal adenocarcinoma (AC) and squamous cell carcinoma (SCC) between 13/01/10 and 24/08/20 were reviewed, including previous OGDs, histology reports, radiological staging and past medical history. The aim was to profile patients to identify risk factors for the development of POUGIC.

Results: 42/588 patients (7%) underwent OGD up to 5 years (med 22 m) prior to cancer diagnosis.

POUGIC pts: aged 53–96 years (med 74.5 years), 21% female, 60% White, 10% Asian, 10% Black, and 20% mixed/other.

Non-POUGIC (546 patients): aged 24-94 years (med 71.5 years), 34% female, 57% White, 10% Asian, 11% Black, and 22% mixed/other.

OGD findings within 5 years prior to UGI cancer, 42 patients (%): "Benign" oesophageal stricture/lesion 14%, Oesophagitis 12%, Oesophageal candidiasis 2%, Barrett's oesophagus (BO) 24%, Hiatus hernia 14%, Gastric ulcer 2%, Gastritis 12%, Normal 24%, Unknown 7%.

7% OGDs < 5 years prior to cancer diagnosis were by a consultant.

POUGIC: 57% oesophageal (33% AC, 24% SCC), 7% GOJ AC, 36% gastric AC.

Non-POUGIC: 30% oesophageal (18% AC, 12% SCC), 8% GOJ (7% AC, 1% SCC), and 19% gastric AC.

POUGIC staging at presentation: 12% T1-2, 45% T3-4, 14% metastatic and 43% unknown. Patients died 0-35 m (med 5 m) after diagnosis.

Non-POUGIC staging at presentation: 13% T1-2, 50% T3-4, 19% metastatic and 35% unknown. Patients died 0-120 m (med 7 m) after diagnosis. All patients with POUGIC and BO were known to have had BO prior to their cancer diagnosis and had undergone endoscopic screening as per BSG guidelines. **Discussion/Conclusion:** POUGIC were < 10% of UGI cancer diagnoses, in accordance with BSG quality standards. Age, gender and ethnicity were similar in both POUGIC and non-POUGIC, and so were not predictive factors. Staging and median survival were also similar between POUGIC and non-POUGIC, suggesting that these outcomes were not affected by an OGD within the previous 5 years. Oesophageal cancer was more common in those that had OGD in the preceding 5 years compared to those that had not, and BO was the most common abnormality in these procedures. 78% POUGIC had risk factors for UGI cancer on their initial OGD (inflammation, ulcer, BO, hiatus hernia, stricture), raising the possibility that treatment could have been optimised, e.g. acid suppression (45% of POUGIC were on PPI before their cancer diagnosis), anti-reflux surgery, lifestyle modifications or improved surveillance. Importantly, 24% of POUGIC also had a "normal" preceding OGD, and with only 7% of these OGD performed by a consultant, it is possible that pathology may have been missed on initial OGD. Additional novel screening techniques, such AI-assisted endoscopy, volatile organic compounds and Cytosponge may help obtain earlier diagnoses in future.

10. The relative significance of individual risk factors in development of the colorectal carcinoma

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Introduction: Aim was to study the risk factors that development colorectal carcinoma.

Methods: We studied retrospectively 133 patients with colorectal carcinoma, diagnosed into a five years period. The diagnosis was based of clinical manifestations, colonoscopy with biopsy criteria.

Results: The type of adenocarcinoma was: papillary in 27 cases, tubular (69 cases), mucinous (17 cases), villous (9 cases) and undifferentiated (11 cases). Most of those patients had Duke's B stage (62 cases) or C stage (54 cases) tumours. The risk factors for develop CC was: polyps (72 cases), dietary lipids (53 cases), inflammatory bowel disease (28 cases), radiotherapy (11 cases), familial adenomatous polyposis (4 cases), physical inactivity (56 cases) and association of these (45). CC developed in 4 patients with CD and in 24 patients with severe UC: 18 cases with extensive colitis and 6 cases with subtotal lesions of colon. In all cases, the duration of disease was longer that 10 years and in 19 patients, the UC was diagnosed in younger patients. A percent of 75% of the UC patients (18 cases) had pseudo-polyps of colon. In 11 cases, CC developed after pelvic radiotherapy, used for: prostate cancer (2 cases), uterine and ovarian cancer (5 cases), Hodgkin's disease (2 cases), bladder cancer (2 cases). The total consumption of dietary lipids or red meat adjusted to the energetic intake presented a strong correlation with the colon cancer (r = 0.69, p = 0.034).

The colorectal polyps seem to be transforming more often in dysplastic lesions at older people compared with younger patients. The risk of CC was higher in patients with more polyps (68 cases). Also, obesity, low physical activity and smoking were associated with an increased risk of develop CC.

Discussion/Conclusion: The risk CC was developed in patients with long duration of UC, with severe forms, which was complicated with pseudo-polyps. Patients after pelvic radiotherapy are at a greater risk developing a CC.

11. The risk of development of gastric cancer in patients with precancerous changes after Helicobacter pylori eradication

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Introduction: The aim of this study were the assessment the risk of development of gastric cancer (GC) at patients with precancerous changes (PC) at three years after Helicobacter pylori (HP) eradication.

Methods: In this multiannual study we assessed the risk to develop GC in 125 patients (51 females, 74 males) with preexistent precancerous changes, organized into two groups: the A group consist of 77 patients with history of HP infection who was eradicated three years ago (the absence of the HP was monitoring in last three years) and the B group contained 48 patients without HP infection. We used rapid urease test and serologic testing for determined HP infection. The history and duration of HP eradication was also quantified.

Results: The incidence of the PC were: atrophic gastritis (66 cases), gastric ulcer (18 cases), gastrectomy (23 cases), gastric polypus (13 cases) and Menetrier gastritis (5 cases). The A group contain all Menetrier gastritis cases, atrophic gastritis (41 cases), gastric ulcer (12 cases), gastrectomy (9 cases), gastric polypus (10 cases). GC was develop in 20 patients (25.97%) of the A group and in 5 cases (10.42%) of the B group. Majority of Menetrier gastritis cases (4 cases) developed GC. In A group, endoscopic forms of the early GC were: type I (polypoid) in 6 cases, type II (superficial) in 2 cases and type III (ulcerated) in 5 cases. In advanced GC we found type Borrmann I in 2 cases, type II in 4 cases and Borrmann IV only one case. The B group had advanced GC in Borrmann forms: II (2 cases), III (one case). The early GC we found in only one case.

The risk of GC development was significantly great (p < 0.01) in patients with long duration of HP eradication, but these parameters was not correlation.

Discussion/Conclusion: The risk of development GC, in patients with PC, was significantly great after HP eradication comparative with never infected patients. This risk is higher when HP eradication necessitate more therapy cure.

12. Colorectal cancer in 17-year-old girl

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Introduction: Colorectal cancer (CRC) is one of the most common cancers. It ranks 4th in morbidity and mortality from this cancer. The average age of onset is 55 years. Most of these tumors arise de novo in both the colon and rectum. Some cancers are associated with molecular abnormalities in the course of Lynch syndrome.

Methods: A 17-year-old woman presented to the emergency room of the Children's Hospital in Bialystok with symptoms of obstruction. The patient reported abdominal pain and occasional blood in the stool. Additional test showed anemia with haemoglobin 7 g/dL and Red Blood Cells count 3.0 thousand. Computed tomography and magnetic resonance imaging showed a nodular lesion in the ileocaecal valve and 3 mestastatic focus in the liver.

Results: Molecular test for mutations associated with microsatellite instability as well as KRAS and NRAS were performed in the postoperative material. We do not found any molecular pathology

Discussion/Conclusion: Single cases of CRC in children or young adults are described in the literature. They are usually advanced tumors with poor prognosis.

13. Various distributions of E-cadherin expression depending on CRC progression

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Introduction: 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 tumors with lower TNM stages, with lymphoid follicles, and with some lower tumor budding parameters, E-cadherin expression was higher. E-cadherin expression was revealed 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.

Methods: The study included 55 colorectal cancer patients admitted to the surgical ward for elective surgery. Tissue samples were obtained from resected specimens and immunohistochemistry expression of E-cadherin was use.

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 localizations 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.

14.Cons and pros for use of photodynamic technique for an early endoscopic diagnosis of colonic neoplasia

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Introduction: Endoscopic verification of the pathological process is the golden standard in the diagnosis of pre-malignant diseases and malignant neoplasms of the GI tract. However, visual assessment of the intestinal mucosa has multiple objective and subjective limitations. Moreover, endoscopic sampling of biopsy material from pathologically affected mucosa under visual control has disadvantages, too. Use of new physical approaches like confocal endoscopy, narrow-band imaging or chromoendoscopic techniques opens new horizons in GI endoscopies. The aim of the study is to evaluate the plausibility of an early endoscopic verification of aplastic changes in colonic mucosa by the use of photodynamic diagnostics method.

Methods: The study is based on 2817 colonoscopies in total, with bioptates taken in 1206 cases (43%). The photodynamic method was used in 72 patients (44 males and 28 females, mean age 59.3 3 10.2 years) with GI neoplasia. According to The Paris endoscopic classification of superficial neoplastic lesions, 11 patients (15%) had a 0-Is type of neoplasia, 18 (25%) had 0-Ip, in 16 patients (22%) – 0-Isp. Non-polypoid neoplasms of type 0-Ila took place in 6 patients (8%), 0-IIb – in 2 (3%). LST-G (0-IIa+Is) neoplasms were diagnosed in 2 patients (3%), LST-NG (0-Ila) in 3 (4%). Type I polypoid cancers were found in 14 patients (20%).

The photodynamic diagnostic (FDD) method is based on the differences of the autofluorescence spectra, which are characteristic for the unaltered colonic mucosa (λ max = 535-565 nm) and the induced fluorescence of morphologically atypical cells with photosensitizer (λ max = 595-640 nm); we used the fluorescence diagnostics system SFD.M16-1S.2 (Ukraine) and hypericin as the photosensitizer medium. Accuracy, Sensitivity, Specificity, and Ratio of endoscopic and histological data congruence (REHDC) were assessed for standard colonoscopy (SC), colonoscopy with chromoendoscopy (CC), narrow-band colonoscopy (NBIC), and FDD colonoscopy (FDDC).

Results: The degree of dysplastic changes showed direct correlation with the intensity of the fluorescent signal from the pathological area, which may be an additional factor in verifying the focus with the pathological changes in the mucosa. Accuracy for SC, CC, NBIC, and FDDC was 71.4%, 87.5%, 93.7%, and 97.1%, respectively. Sensitivity – 72.1%, 89.7%, 90.6%, and 94.9%, respectively. Specificity – 65.7%, 81.3%, 83.7%, and 94.2%, respectively. And FDDC – 68.5%, 83.4%, 87.3%, and 95.2%, respectively.

Discussion/Conclusion: The use of FDDC allows to increase the accuracy, sensitivity and specificity of verification of neoplastic processes of the colonic mucosa. Photodynamic diagnostics is a modern, highly informative screening technique for early endoscopic detection of aplastic colonic processes with the frequency of coincidence of endoscopic and histological diagnoses of 95.2%. Whereas this method showed benefits, several drawbacks and limitations were revealed, similar to previously published data, including dependence of technique quality and personnel experience.

15.Detection of abnormalities in KRAS and NRAS genes in serrated lesions of the colon

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Introduction: Colorectal cancer (CRC) is a heterogeneous disease entity which is develops mainly on precancerous lesions. The most common precancerous lesions are adenomas with the mutations of APC gene. Moreover, thirty percentage of CRC arises on serrated lesions. Therefore, the objective of the present investigation is to analyze histological features and molecular changes in serrated lesions of the colon.

Methods: The study group consists of 25 hyperplastic polyps (HP), 50 sessile serrated lesions (SSL) and 25 traditional serrated adenomas (TSA). The retrospective analysis of morphological features was done in archive slides stained with hematoxylin-eosin (H-E) by two pathologists and categorized in the basis of WHO Classification of Tumors, 5th Edition (2019). Somatic mutation status was performed on an in vitro diagnostic tests intended for the qualitative detection of exons 2,3,4 in KRAS and NRAS genes in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Real-time PCR amplification and targeted sequence detection were used to conduct the molecular changes.

Results: Molecular examination confirmed the presence of the KRAS and NRAS gene mutations in 20% of HP, 18% of SSL and 59% of TSA. Presence of KRAS gene mutations observed in elderly patients (p = 0.009; R = 0.520). The analysis of the tested material showed that somatic mutations in codon 12 (G12D, G12V) in exon 2 in KRAS gene of 4 patients with HP. HPs with mutations in KRAS gene tended to be larger (p = 0.077). Somatic mutations in codon 12 (G12D), codon 13 (G13D) in exon 2 in KRAS gene, in codon 61 (Q61K) in exon 3 and in codon 146 (A146T/V/P) in exon 4 in KRAS gene were observed in patients with SSL. Cases of SSL with KRAS mutations were associated with the presence of dysplasia (p = 0.077; R = 0.335) and were more common in older patients (p = 0.020; R = 0.327). Moreover, in tissue material of patients with TSA, we found in 8 cases of codon 12 (G12V, G12C,G12D) in exon 2 and in 2 cases of codon 146 (A146T/P/V) in exon 4 of KRAS gene. TSAs with the mutations tested occurred more frequently with other polyps than with single lesions. We did not confirmed any mutations in NRAS gene.

Discussion/Conclusion: Analysis of the tested material showed that somatic mutations of the KRAS gene occur in 20% of HP; 18% SSL, 59% TSA and demonstrated a high cancerous ability to development of CRC.

16. The efficacy of immediate second-look endoscopy for the prevention of post-endoscopic submucosal dissection of the gastric neoplasms

Jae Hak Kim (Goyang, KR)

Introduction: Gastric endoscopic submucosal dissection (ESD) is a curative treatment for early gastric cancer and gastric adenoma. After the procedure, bleeding occurs in 2–15% of cases. post-ESD bleeding is associated with a long procedure time. Therefore, a brief break after retrieval of the specimen could give the operator meticulous examination of the ESD site. This study was to investigate the efficacy of immediate second-look endoscopy for the prevention of early delayed post-ESD bleeding.

Methods: A total of 262 gastric ESD cases were retrospectively analyzed and were and divided into three groups: the immediate second-look (n = 79), scheduled second-look (n = 86), and no second-look (n = 97). Immediate second-look endoscopy was defined as repeated

upper endoscopy soon after complete hemostasis of the ESD site and specimen fixation with the pins. Early delayed bleeding was defined as before 24 h and late delayed bleeding after 24 h after the ESD procedure, respectively.

Results: Post-ESD bleeding occurred in 19 cases (7.3%). Of these, 13 cases (68.4%) were early delayed post-ESD bleeding. The immediate second-look endoscopy had a lower incidence of early delayed post-ESD bleeding compared to the groups without immediate second-look endoscopy, (3.8% vs. 0.8%, p = 0.009). In a multivariate analysis, immediate second-look endoscopy significantly reduced early delayed post-ESD bleeding (odds ratio [OR] = 0.39, p = 0.022). The resected specimen area \ge 1,000 mm2 was an independent risk factor for early delayed post-ESD bleeding (OR = 8.98, p = 0.010). However, the frequency of delayed post-ESD bleeding did not differ between the three groups.

Discussion/Conclusion: Immediate second-look endoscopy after gastric ESD could prevent early delayed post-ESD bleeding in a large lesion.

17. Concomitant neuroendocrine tumor and colorectal cancer: A rare clinical case presentation

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Introduction: Gastrointestinal neuroendocrine tumors (GI NETs) originate from neural and endocrine cells, triggering a range of hormone related syndromes. The most common location of appearance are small intestine and rectum, but it can be found anywhere in GI tract. GI NET of gastroesophageal junction (GEJ) is rare and controversial in clinical presentation and tumor biology. Just few cases described in literature about concomitant neuroendocrine tumor and other cancers.

Results: Case presentation

Here in, we present a case of 67-year-old female with clinical presentation of abdominal discomfort and sideropenic anemia. Patient underwent to upper gastrointestinal endoscopy, small polyp was detected at GEJ, resected with biopsy forceps. Histopathological features confirmed neuroendocrine tumor (NET, G1). To ensure complete removal of the tumor and prevent recurrence, a control gastroscopy was performed, and a 5 mm polyp on GEJ was removed using a combination of band ligation and mucosectomy in healthy tissue. Abdominal CT was indicated to check up if the illness is spread to other body organs. Oncological treatment is not needed. Afterwards, six months after endoscopic resection of the GI-NET, the patient continued to experience symptoms and was found to have a tumor mass on the liver flexure during lower GI endoscopy. This turned out to be colorectal adenocarcinoma, which is not uncommonly associated with GI NETs. The patient subsequently was operated and right hemicolectomies was performed. After started oncological treatment, she has remained alive and well for three years.

Discussion/Conclusion: Overall, this case underscores the need for close monitoring and evaluation of patients with GI NETs, as well as the possibility of other malignancies being present. While some GI NETs may be managed conservatively, others may require more aggressive treatment depending on their size, location, and degree of malignancy.

18. The value of developing a regional Specialist Hepatology Nurse network

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Introduction: The North East and Yorkshire Liver Nurse Network (NEYLNN) was created in 2020 by a group of liver nurses in collaboration with a pharmaceutical company. Originally intended to plug the gaps of the lone Clinical Nurse Specialists (CNS) working in liver care; it quickly developed as a forum to facilitate the sharing of expertise, service development, professional support and ultimately improving care to a vulnerable patient group.

Methods: Collaboration with Pharma enabled the identification of CNS's within the locality. Covid-19 lockdowns dictated the use of online meetings; these lasted around 30 minutes and were held quarterly. Invites and topics for discussion were distributed via email, with links for those unable to attend to submit queries. Meetings provided an open forum to discuss issues such as service challenges, and offered a vital opportunity to celebrate achievements. The inaugural face-to-face meeting in Summer 2022 was a full day event attended by ~20 Hepatology CNS. Meetings continued bi-annually with the support of the initial Pharma team. Content is decided by the NEYLNN with a focus on aspects of liver care relevant to all. Presentations are provided by a variety of speakers, including members of the network, enabling a safe forum to gain experience in this way. Topics such as palliative care, day case paracentesis, community non-alcohol related liver disease (NAFLD) pathways, and a patient story were amongst those presented. Attendance by managers and matrons is encouraged to raise awareness of liver care and the struggles encountered with service delivery.

Results: Approximately 35 liver nurses have joined the network. In addition to attending face-to-face and online meetings, members are regularly in contact via email. The network provides the opportunity to discuss clinical and service issues, ideas for improvement, sharing practices and pathways to facilitate consistent and co-ordinated regional practices. The network is invaluable in its original concept for lone workers accessing peer support. Members report benefits including improved professional development, increased confidence and enhanced well-being. The network identified scientific writing and communication as a specific learning need; therefore, an additional result is the production of this abstract by a subgroup of the network.

Discussion/Conclusion: Networking is integral to nursing; supporting professional advancement, enabling the dissemination of expertise between peers, in addition to providing a supportive forum to share experiences. The benefits are widespread and vary between individuals. The NEYLNN hopes to inspire CNS networks in other regions, and therefore contribute to supporting liver nurses nationally.

19. Conclusion on substantiating the need for a modern method of differential diagnosis of colon tissues during colonoscopy

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Introduction: One of the main tasks of an endoscopist during a colonoscopy is to take the biopsy material as accurately as possible. Histology examination of tissue samples obtained during colonoscopy is usually sufficient to establish the presence or absence of tumor cell complexes and ulcerative changes. Because the area of spread and invasion of tumor cells and ulcerative lesions can be invisible, the doctor usually relies on his own experience and intuition. Despite the fact that this method is the most reliable and common worldwide, it has a long lead time - up to 6 days, so an alternative or additional method has been developed and proposed that allows you to determine and differentiate the nature of colon lesions during

colonoscopy, because the duration of biopsy research is 60 seconds. (V. Sulyma, V. Gaponov, V. Kravchenko, L. Mescheryakov; 1999-2001).

Methods: This method is based on the difference in the concentration of intracellular trace elements in tumor, inflammatory and normal tissues of the colon wall.

Results: The authors use the well-known phenomenon of the photo effect. Irradiation of a tissue sample with a mini- γ -quantum causes a loss of negative charge by cells, thus creating a photoelectric effect (Stoletov effect), which will be strictly individual for neoplastic, inflammatory and normal tissues. To differentiate various pathological formations, the authors measure the intensity of absorption of γ -quantum by cells, as well as the characteristic emission of trace elements present in the tissue.

Discussion/Conclusion: Thus, the key point of the presented method is to distinguish the concentration of trace elements in malignant, non-malignant, inflammatory and normal tissues. This circumstance can be explained by the complex and related function of the sodium pump in carcinogenesis.

We recommend the use of the express method of mini- γ -quantum research when taking biopsy material during colonoscopy for the differentiation of pathologically changed tissues.

20. Endoscopic assessment of mucosal changes: Diagnostic value and accuracy of standard colonoscopy, narrow-band imaging, and polarized confocal microscopy of colon

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Introduction: The endoscopic assessments of mucosal changes in IBD and microscopic colitis are accepted as a measure of disease activity, therapeutic checkpoint, and the key prognostic indicator. However, standard colonoscopy only approximately evaluates visual appearance of the mucosal surface and requires multiple biopsies for better diagnostic results, especially in case of microscopic colitis, compared to more advanced confocal endomicroscopy (CE) that enables in vivo visualization of epithelial mucosa at up to ×1000 magnification. Narrow-band imaging (NBI) has now replaced the major role of chromoendoscopy because of its convenience and simplicity. CE is being introduced into clinical practice during last decade with limited use due to technical difficulties and subjectivity of results assessment. In fact, to avoid subjectivity visual pictures obtained during colonoscopies need to be digitized and analysed. The fractal optical nature of the biological tissues stimulates creation and implementation of new physical methods in optical engineering, diagnostics and analysis of biological properties of colic mucosa. In recent years, coherent polarimetric endomicroscopy (CPE) became widely used in military and space innovations as a potent diagnostic tool. The difference of CPE compared to NBI is even narrower (laser-generated) wavelength potentially providing more detailed visualization additionally utilizes different angle polarizing panes to form the visual picture. The object of this research is to combine several endoscopic approaches and their computer-assisted analysis for improving colonoscopy diagnostic value and accuracy in IBD and microscopic colitis.

Methods: Fluorescein sodium based endoscopic system was used for multiple colonoscopic examinations of 43 IBD and 5 microscopic colitis patients. Obtained and recorded by CPE device pictures were digitally processed in MathLab® software. In addition to visual assessment, following optical parameters were calculated: S-average polarization value, Mx-mathematic expectation, STD2-average squared variation, Dx-disperse, As-asymmetry, Ex-excess,

MEDx-median. Stocks-polarimetry of obtained static visual images was the final step for data analysis. The obtained statistical data was compared with histological data and 26 control group healthy volunteers and histological findings in bioptates.

Results: Data obtained at the study showed that the pathological process involving inflamed colonic mucosal structures is usually accompanied by the sufficient enlargement and disorientation of anisotropic and amorphous optical components while inner layers remain less anisotropic. CPE variables obtained in control and study groups (respectively) were as follows: S = 0.3397492 vs 0.4314872 (p < 0.05); Dx = 0.0087377 vs. 0.0112804 (p < 0.05); As = 77.3463338 vs. -2.0407966 (p < 0.000); Ex = 2591.8348943 vs. 1231.3691156 (p < 0.000); MEDx = 0.3529412 vs. 0.4196078 (p < 0.05). STD2 did not statistically differ in study group and healthy control. Stocks-polarimetry showed 23.1-28.6% increase of Stocks vector maximal value in study group, and two-three-fold evaluation of statistical distribution parameters. Each static visual picture provided insufficient information in case of microscopic colitis. However, the selected approach allowed accumulation of multiple images and their mathematic analysis without multiple biopsies.

Discussion/Conclusion: Endoscopic visualisation of intact and pathologically changed mucosa is a major diagnostic tool for IBD, though CE improves its value. CPE is a potent development of CE introducing digitization of the visual picture and its possible standardization, possibly decreasing subjectivity of investigation due to 'human factor'. However, lack of experience and specialized diagnostic software makes this technology not fully accessible.

21. Study of an endoscopic radiofrequency ablation use for early esophageal squamous cell neoplasia

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Introduction: Most (80%) esophageal cancers occur in developing countries. Whereas esophageal adenocarcinoma's rising incidence in the Western society during last decade attracts attention, the squamous cell cancer (SCC) continues to be the most common type of esophageal cancer in the rest of the globe. If early esophageal SCC is timely diagnosed it creates conditions for minimally invasive endoscopic treatment. Among possible options endoscopic resection has been widely accepted as an effective therapeutic strategy for early esophageal SCC (with negligible risk of lymph node metastases) because it offers comparable success rates with esophagectomy, causing significantly lesser risk of morbidity and mortality. Radiofrequency ablation (RFA) is generally used as a safe and effective technique for eradicating early neoplasia (adenocarcinoma) due to Barrett's esophagus, resulting in a high rate of complete eradication of neoplasia. Therefore, we aimed on studying the RFA efficacy in early esophageal SCC.

Methods: Seven male patients (six with low-to-moderate-grade mucosal, and one with highgrade dysplasia) participated in the prospective cohort study. Inclusion criteria were based on SCC features, no submucosal invasion or lymphadenopathy; abdomen and chest with no metastasis. Exclusion criteria: technical limitations (strictures, bleeding, varices, etc.), prior endoscopic resection, previous history of non-squamous cell cancer of the esophagus, invasive esophageal SCC, lymphadenopathy or metastasis, previous ablation or RFA, previous esophageal surgery. Both standard endoscopic visualization as well as chromoendoscopy with 1–3% iodine solution (squamous epithelium contains little glycogen and remains unstained) were performed to detect the early neoplasm. RFA was performed first circumferentially and focally after 3 months of observation (if necessary) using the 40 W/cm2 system, consisting of ablation catheters and endoscope mounted ablation device.

Results: After 3 months following the primary procedure 85.71% presented with adequate histological response proved by biopsies. One patient required additional focal RFA due to remaining positive histology. There were no serious adverse events such as bleeding, perforation, and infection. No mortality in the study throughout whole duration was observed as well. There was one mucosal laceration, which required no intervention. After circumferential RFA, one patient developed moderate esophageal stricture (circumferential scarring allowing passage of therapeutic endoscope). Stricture successfully resolved with dilation.

Discussion/Conclusion: In patients with early esophageal SCC, RFA showed a high rate of adequate histological response, no neoplastic progression, and an acceptable adverse event profile. RFA's use in early esophageal SCC shows its higher efficacy compared to use in Barret's epithelium, probably due to different sensitivity of different types of cells. imitations of this study include small patient sample size and absence of control group.

22. Comparing different types of endoscopy for lower GI cancer screening

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Introduction: Colorectal malignancies are the second commonest cause of cancer related mortality in the Western societies with the median five-year survival rate of less than 50%. Early diagnosis is unlikely to occur through increased awareness or patient education, as the symptoms and signs of bowel malignancies are non-specific and occur late. Therefore, screening remains the best possible alternative for late diagnosis. Amongst multiple screening tests for colorectal neoplasms, stool-based tests and endoscopy are the only ones which are serious contenders for population screening. Endoscopic screening shows promise, but results from endoscopic screening studies are confusing and has shown no significant reductions in mortality or incidence in a randomized population-based setting. In part, this may be explained by variations in endoscopic techniques used, their sensitivity and accuracy. Consequently, we aimed this study to determine screening efficacy of different endoscopic methods.

Methods: Design of the study was based on the CRC Screening: Updated ACG Guidelines (2018–2022). In total 155 patients underwent screening colonoscopies including standard fiber-optic colonoscopy (28 patients, control), colonoscopy with chromoendoscopy (23 patients, study group 1), NBI colonoscopy (32 patients, group 2), and photodynamic (FD) colonoscopy (72 patients, group 3). All patients underwent full bowel preparation; unsuccessful endoscopies were excluded from the study. Updated Paris classification of superficial neoplastic lesions in the digestive tract was used.

Results: Presentation of data was as follows: in control, O-Is – 3 (11%), O-Ip – 5 (18%), O-Isp – 7 (25%), O-IIa – 2 (7%), O-IIb – 2 (7%), LST-G – 2 (7%), LST-NG – 0, and cancer I – 7 (25%); study group 1, O-Is – 3 (13%), O-Ip – 2 (9%), O-Isp – 4 (17%), O-IIa – 2 (9%), O-IIb – 2 (9%), LST-G – 1 (4%), LST-NG – 1 (4%), and cancer I – 8 (35%); study group 2, O-Is – 3 (9%), O-Ip – 6 (19%), O-Isp – 6 (19%), O-IIa – 4 (13%), O-IIb – 2 (6%), LST-G – 2 (6%), LST-NG – 1 (3%), and cancer I – 9 (28%); study group 3, O-Is – 11 (15%), O-Ip – 18 (25%), O-Isp – 16 (22%), O-IIa – 6 (8%), O-IIb – 2 (3%), LST-G – 2 (3%), LST-NG – 3 (4%), and cancer I – 14 (20%). This data may be compared to mean values: 13%, 20%, 21%, 9%, 5%, 4%, 3%, and 25%, respectively. Methods sensitivity varied from 89.7% to 94.9%.

Discussion/Conclusion: Whereas this study has limitations related to the size and design, it is obvious that various endoscopic approaches has different potential for being used as a screening tool. Subjective factors, like experience and quality of equipment, etc. may impact the screening efficacy of the methods as well.

23. Glutathione peroxidase (GPx) a potential biomarker to screening and diagnosis patients with gastric cancer

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Introduction: According to the Global Cancer Observatory (GLOBOCAN), gastric cancer (GC) was classified as 4th most common type of cancer in the world among men and 7th most frequent one in women. The aim of our study was to evaluate the antioxidant barrier according to the level of glutathione peroxidase (GPx) in gastric cancer patients. We are also to assess the diagnostic utility of GPx in GC patients in respect to histopathological classifications (TNM, Lauren's and Goseki's classification) and histopathological parameters such as histological type, histological differentiation grade as well as presence of vascular or neural infiltration and desmoplasia.

Methods: Methods: 50 patients (17 female, 33 male) with gastric cancer and 50 healthy controls matched for sex and age were included in the study. GPx activity was evaluated using the colorimetric method by measuring the oxidation of NADPH (reduced form of nicotinamide adenine dinucleotide phosphate) at 340 nm. One unit of GPx activity was defined as the amount of the enzyme catalysing the oxidation of 1 mmol NADPH per 1 minute.

Results: Results: The activity of GPx (p < 0.0001) was considerably lower in GC patients compared to the control group. The GPx is characterized by high AUC value in differentiation GC patients according to histopathological parameters. GPx proved to be helpful in differentiation moderately differentiated (G2) from poorly differentiated tumours (G3) (AUC for GPx = 0.7067). We also demonstrated a very high diagnostic value of GPx (AUC = 0.6997) in differentiating the groups of patients with gastric cancer at stage pT1+pT2 of tumour invasion from patients with stage pT3+pT4. We showed a high diagnostic value of GPx (AUC = 0.7135) in differentiation diffuse type from intestinal type of gastric cancer according to Lauren classification. Particular attention should be paid to GPx for which AUC in the presence of vascular infiltration were 0.8000.

Discussion/Conclusion: Conclusion: Gastric cancer is strongly linked to systemic redox imbalance as well as increased oxidative damage to proteins, lipids and DNA. GPx can be potential diagnostic bi of gastric cancer advancement.

24. Endoscopic resection of upper gastrointestinal subepithelial tumours: Our clinical experience

Oktay Yener (Istanbul, TR)

Introduction: Upper gastrointestinal subepithelial tumours (SETs) are generally asymptomatic and clinically insignificant and have malign, borderline and benign variants. In advanced endoscopic procedures, histopathological diagnosis and endoscopic resection are possible and feasible.

Methods: In this study, we examined our approach to upper gastrointestinal subepithelial tumours and our clinical results. Adult patients who applied to Surgical Endoscopy unit between January 2022 and January 2023 were included in the study. The patients' files and final histopathological diagnoses were recorded and analysed retrospectively for this single-center study.

Results: The total of 8 patients were four female (50%) and four male (50%), aged 31-66 years (median, 53 years). The tumoral lesions were located 4 (50%) patients in esophagus, 3 (37.5%) patients in stomach and one (12.5%) patient in duodenum and their diameter ranged from 5 to 30 mm (median, 14 mm). Post-interventional no complications or abdominal symptoms were encountered. Also, in early follow-ups for six months, no recurrence was observed.

Discussion/Conclusion: Our experiences together with literature reported here, indicated endoscopic resection is a safe and effective method of treatment for most patients with upper gastrointestinal SETs.

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