International Session | 内科・外科

2026年11月21日(土) 9:20 ~ 10:10 | 第9会場（1F 会議室101-A）

International Session 5　Emerging strateties for colorectal diseases

Moderator：Yojiro Hashiguchi（Omori Red Cross Hospital, Japan）、Masayuki Fukata（Inflammatory Bowel Disease Center, Tokyo Yamate Medical Center, Japan Community Healthcare Organization, Japan）

[INTS5-1] Colonoscopy as a Cornerstone in the Diagnosis and Management of Colorectal Polyps

*Aynur Kamal Safiyeva[1] (1. Central Customs Hospital, Baku , Azerbaijan, General Surgery Department, Azerbaijan)

[INTS5-2] A surgical case report of transverse colon cancer with lymph node metastasis invading into the superior mesenteric vein

*Takahiro Amano[1], Tomokazu Okazaki[1], Kanro Matsui[1], Kazuya Niwa[1], Tadaaki Shimizu[2], Tomoki Shirota[1], Kuniyuki Gomi[1] (1. Department of Surgery, Suwa Red Cross Hospital, Japan, 2. Department of gastroenteorological surgery, The University of Shinshu)

[INTS5-3] Can Local AI Match the Surgeon Pilot Study of Five AI Models in Colorectal Cancer Operative Decision-Making

*Takeshi Yanagita[1,2], Shinichiro Tsuru[1], Ryoji Umeki[1], Sawamura Naoki[1], Shuji Kurata[1], Futoshi Teranishi[2] (1. Department of Surgery, Shonan Fujisawa Tokushukai Hospital, Japan, 2. Department of Surgery, Toyokawa City Hospital)

[INTS5-4] Clinical impact of a multiplex gastrointestinal pathogen panel for rapid diagnosis of infectious enteritis in hospitalized patients

*Tomomi Yajima[1], Fumitake Hata[1], Hidefumi Nishimori[1], Kuniaki Okada[1], Chikashi Kihara[1], Kiyoteru Kashiwagi[1], Keisuke Ohno[1], Hideharu Miura[1], Takeshi Sawada[1], Chikako Iguchi[2], Yoshiya Morito[2], Kunihiro Takanashi[2], Takae Minami[2], Kimiko Ikeda[2], Sei Kurokawa[2], Yusuke Makiguchi[2] (1. Department of Surgery, Sapporo Dohto Hospital, Japan, 2. Department of Internal Medicine, Sapporo Dohto Hospital)

[INTS5-5] Relationship between the location of initial tumors and the prevalences of metachronous tumors in colonoscopic surveillance

*Seiji Kimura[1], Daisuke Nishiya[1], Kazunori Satoh[1], Hiroyuki Higuchi[1] (1. Division of Gastroenterology and Endoscopy, Aomori Rousai Hospital, Japan)

[INTS5-6] Yellow Enhancement Mode Improves Vascular Visualization in Laparoscopic Colorectal Surgery: Quantitative Image Analysis and Implications for Surgical Education

*Kohei Shigeta[1] (1. Department of Surgery, Keio University School of Medicine, Japan)

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Background: Colorectal polyps are among the most common pathologies of the large intestine, predominantly affecting individuals over 50 years of age, with equal distribution between sexes. As precancerous lesions, colorectal polyps play a critical role in the development of colorectal cancer, with approximately 90% of cancers arising from adenomatous polyps. The risk of malignant transformation increases with polyp size.
Aim:To evaluate the diagnostic and therapeutic significance of colonoscopy in the detection and management of colorectal polyps.
Materials and Methods: A retrospective analysis was conducted on 1,375 patients who underwent colonoscopy. Indications included abdominal pain, rectal bleeding, bloating, altered bowel habits, mucus or bloody discharge, constipation, and screening in patients over 40 years of age. Endoscopic polypectomy was performed in 118 patients using snare and biopsy forceps techniques, and all specimens were submitted for histopathological examination.Results:
Polyps detected in the colon and rectum were managed according to size. Polyps smaller than 0.5 cm were removed using biopsy forceps, while larger polyps were excised using a snare. A positive correlation was observed between polyp size and histopathological severity. Smaller polyps were predominantly hyperplastic, whereas larger lesions were more frequently adenomatous. Follow-up colonoscopy was recommended at 1 year for tubular adenomas and at 6 months for tubulovillous and villous adenomas. High-grade dysplasia was identified in two patients, both of whom were referred for surgical intervention. Bleeding occurred in three patients during polypectomy and was successfully managed endoscopically. Recurrent polyps were detected in four patients during follow-up.
Conclusion:
Colonoscopy is the gold standard for both the diagnosis and treatment of colorectal polyps. Its accurate and thorough application enables early detection, effective management, and appropriate surveillance, significantly reducing the risk of colorectal cancer.

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[INTS5-2] A surgical case report of transverse colon cancer with lymph node metastasis invading into the superior mesenteric vein

*Takahiro Amano[1], Tomokazu Okazaki[1], Kanro Matsui[1], Kazuya Niwa[1], Tadaaki Shimizu[2], Tomoki Shirota[1], Kuniyuki Gomi[1] (1. Department of Surgery, Suwa Red Cross Hospital, Japan, 2. Department of gastroenteorological surgery, The University of Shinshu)

[Case Report] An 85-year-old male was diagnosed with advanced transverse colon cancer with lymph node metastasis at the root of the middle colic vein, the lymph node invaded directly into the superior mesenteric vein (SMV); furthermore, liver metastases were detected in segments 7 and 3. The colon cancer staging was clinically T4a N2b M1a, Stage IVA.
[Surgical Findings] Robotic-assisted surgery was selected, beginning with a medial approach. Ligated the ileocecal artery and vein and the right branch of the middle colic artery, leaving the invading lymph node. The transverse mesocolon was resected, reaching the colon wall. Full mobilization of the hepatic flexure and dissecting the pre-pancreas plane up to the vicinity of the invading lymph node were performed; the terminal ileum and the colon were transected. Since resection of the tumor thrombus was deemed feasible, the procedure was converted to open surgery. The right gastroepiploic artery and vein were dissected, and the SMV was exposed at the inferior of the pancreas and taped. The root of the middle colic artery was transected, leaving only the tumor thrombus infiltrating the SMV. The distal SMV, the first and second jejunal veins, were taped and clamped with Satinsky forceps; the SMV was then released and excised along with the tumor thrombus. The SMV was reconstructed using end-to-end anastomosis with 5-0 monofilament suture. Since R0 resection of the primary tumor was achieved, we performed a simultaneous partial hepatectomy. The operative time was 8 hours and 42 minutes, with a console time of 3 hours and 8 minutes, and the amount of blood loss was 700 ml. He was discharged home on the 14th postoperative day, and underwent chemotherapy for recurrent liver metastasis, and finally died of the primary disease 2 years and 2 months postoperatively.
[Summary]We report a surgical case of transverse colon cancer with lymph node metastasis invading into the superior mesenteric vein, along with our considerations.

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Background: AI is transforming medicine, including colorectal surgery. Large Language Models—the technology behind ChatGPT—now run locally without internet connection, offering privacy-preserving support. This pilot study evaluated five Local AI models for colorectal cancer operative decision-making in remote islands and rural communities.

Methods: Preoperative data from 89 prospectively collected patients (13 non-operated; 76 operated) were retrospectively analyzed. Variables (BMI, ASA-PS, ECOG PS, nutritional indices, comorbidities, ADL/IADL, tumor location, TNM stage) were submitted to Local AI from OpenAI, Google, Alibaba, Meta, and DeepSeek. Each selected one of four strategies: curative resection with/without anastomosis, reduced resection, palliative stoma/bypass, or non-operative management. Selections were compared to attending surgeons' decisions as the reference standard.

Results: Four models (OpenAI, Google, Alibaba, Meta) agreed with surgeons' actual decisions in 71.9% of cases: 75–83% among operated patients, dropping to 8–54% among non-operated patients. DeepSeek showed uniform 46% agreement regardless of operative status. Inter-model agreement was 66–80% within the cluster but only 22–43% between DeepSeek and others.

Discussion: Four of five models showed meaningful procedure-selection agreement but favored curative over reduced or palliative options—underweighting the balance between oncological goals and patient tolerance. Paradoxically, DeepSeek's more complex cumulative-risk algorithm showed the lowest, most uniform agreement (46%), suggesting algorithmic sophistication alone does not ensure clinical alignment. Discordant cases warrant prospective reassessment.
Conclusions: Four Local AI models can meaningfully support operative procedure selection with high inter-model consistency. The decision of whether to operate—and how aggressively—demands irreplaceable bedside judgment. This pilot supports a privacy-preserving AI system for specialist-level guidance in remote and underserved communities.

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[INTS5-4] Clinical impact of a multiplex gastrointestinal pathogen panel for rapid diagnosis of infectious enteritis in hospitalized patients

*Tomomi Yajima[1], Fumitake Hata[1], Hidefumi Nishimori[1], Kuniaki Okada[1], Chikashi Kihara[1], Kiyoteru Kashiwagi[1], Keisuke Ohno[1], Hideharu Miura[1], Takeshi Sawada[1], Chikako Iguchi[2], Yoshiya Morito[2], Kunihiro Takanashi[2], Takae Minami[2], Kimiko Ikeda[2], Sei Kurokawa[2], Yusuke Makiguchi[2] (1. Department of Surgery, Sapporo Dohto Hospital, Japan, 2. Department of Internal Medicine, Sapporo Dohto Hospital)

Rapid identification of causative pathogens is essential for determining appropriate treatment and infection control in infectious enteritis. Conventional stool culture requires several days to obtain results. Recently, multiplex gastrointestinal pathogen panels (GI pathogen panels) such as the FilmArray GI panel allow simultaneous detection of 22 bacterial, viral, and parasitic enteric pathogens from stool samples within approximately one hour. However, their clinical use in Japan remains limited because the test is not covered by the national health insurance system.

We report two hospitalized patients with infectious enteritis in whom rapid molecular testing using the FilmArray GI panel enabled early etiological diagnosis.

Case 1 was a previously healthy adult presenting with abdominal pain and severe diarrhea. Campylobacter enteritis was suspected based on the clinical course and recent consumption of meat, and azithromycin had been administered before admission. Stool culture and immunochromatographic antigen testing were negative; however, the GI pathogen panel detected Campylobacter, confirming the diagnosis and supporting the antimicrobial treatment strategy.

Case 2 was a previously healthy adult presenting with severe abdominal pain followed by diarrhea. The GI pathogen panel detected norovirus GI/GII while excluding other bacterial and viral pathogens, enabling a definitive diagnosis and prompt infection control measures.

In both cases, results were obtained within approximately one hour after testing. These findings highlight the clinical usefulness of GI pathogen panels for the rapid etiological diagnosis of infectious enteritis. Rapid pathogen identification using a GI pathogen panel may facilitate timely clinical decision-making and appropriate infection control. If covered by the national health insurance system in Japan, it may serve as a point-of-care diagnostic tool in clinical practice.

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Background and Aims: Recently it was reported initial right-sided adenoma may be a risk factor for colorectal cancer. The present study aimed to compare the cumulative incidences of metachronous lesions according to the locations of initial lesions during surveillance.
Methods: 2411 patients who underwent follow-up colonoscopies (median follow-up period 79.5 months, exam frequency 4.08 times) were classified according to the locations of initial lesions as follows; 1218 patients in whom initial lesions in the right or bilateral colon were resected (group A), and 1193 in whom initial lesions in the left colon only were resected (group B). They were sub-classified by initial findings as follows; 531 patients in group A1 and 420 in group B1 with diminutive adenomas, 378 in A2 and 279 in B2 with low-grade adenoma less than 10mm, 194 in A3 and 243 in B3 with high-grade adenoma or adenoma in size of 10-19 mm, and 115 in group A4 and 251 in B4 with TIS, T1 cancer, adenoma more than 20 mm in size, respectively. The cumulative incidences of metachronous index lesions (>10mm, villous, high-grade adenoma and/or cancer) were compared between group A and B using Kaplan-meier method.
Results: During follow-up the prevalences of index lesions were 16.0% in group A1, 17.1% in group B1, 19.6% in A2, 18.6% in B2, 23.7% in A3, 19.8% in B3, and 26.1% in A4, 24.3% in B4, respectively. There were no statistical differences between the prevalences of index lesions between any sub-groups in group A and B. Hazard ratios by logrank test between subgroups in group A and B were as follows; HR=0.94 (95%CI:0.68-1.29) N.S. ＜A1 vs B1＞, HR=0.99 (0.69-1.41) N.S. ＜A2 vs B2＞, HR=1.25 (0.85-1.86) N.S. ＜A3 vs B3＞, HR=1.16 (0.77-1.78) N.S. ＜A4 vs B4＞. Logrank test revealed no statistical differences between any sub-groups in group A and B. The prevaleces of metachronous invasive cancers were 1.4% in group A and 1.5% in group B with no statistical difference.
Conclusion: The comparison of cumulative incidences of metachronous index lesions between right-sided and left-sided initial lesions disclosed no significant difference.

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[Background] Precise vascular identification is critical for safe laparoscopic colorectal surgery, particularly in adipose-rich operative fields where conventional white-light imaging provides limited tissue contrast. Yellow Enhancement (YE) mode is a real-time digital imaging technology developed to selectively amplify yellow color components. However, its quantitative impact on vessel visualization has not been objectively characterized.
[Methods] A retrospective paired image analysis was conducted in 10 consecutive patients undergoing laparoscopic colorectal resection at our institution. Paired images under white-light imaging and YE mode were obtained from identical surgical scenes during perivascular dissection. Regions of interest were defined for vascular structures and adjacent adipose tissue. Color parameters in the CIELAB color space (L*, a*, b*) were measured, and contrast-to-noise ratio (CNR) and color difference (ΔE) were calculated. A total of 52 surgical scenes yielding 87 vascular observations (41 arterial, 46 venous) were analyzed.
[Results] YE mode significantly increased CNR in the b* channel compared with white-light imaging (7.82 ± 3.87 vs. 4.44 ± 3.04; $p < 0.001$). ΔE was also significantly higher under YE mode (63.27 ± 15.51 vs. 26.52 ± 10.40; $p < 0.001$), indicating enhanced color separation between vessels and surrounding tissue. These effects were consistent across both arterial and venous structures and were reproducible at the patient level. Luminance-based contrast ratio showed no significant difference ($p = 0.17$), confirming that YE mode selectively enhances chromatic rather than brightness contrast. Questionnaire results from young surgeons demonstrated improved subjective visibility and anatomical clarity under YE mode, consistent with quantitative findings.
[Conclusion] YE mode significantly enhances vascular-tissue contrast through selective chromatic modulation along the yellow-blue axis, without additional procedural burden.

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