English Abstract Session

Fri. Nov 14, 2025 9:20 AM - 10:20 AM JST | Fri. Nov 14, 2025 12:20 AM - 1:20 AM UTC Room 10

[E2] English Abstract Session 2 Colorectal Surgery 1

Moderator:Atsushi Hamabe(Department of Gastroenterological Surgery Graduate School of Medicine, The University of Osaka), Mina Ming-yin Shen(Department of Surgery, China Medical University Hsinchu Hospital, Taiwan)

[E2-1]

Outcomes of NOSES vs TLRH for Right-Sided Colon Cancer: A Propensity Score-Matched Study

Zheng Xu, Yueyang Zhang, Xu Guan, Yihang Shi, Haipeng Chen, Zhixun Zhao, Zhaoxu Zheng, Haitao Zhou, Xishan Wang (Department of Colorectal Surgery, National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College)

[E2-2]

Short-term Outcomes of NOSES vs Conventional Laparoscopic Surgery in CRC

Xu Guan (Department of Colorectal Surgery, National Cancer Center/NationalClinical Research Center for Cancer/Cancer Hospital, Chinese Academy ofMedical Sciences and Peking Union Medical College)

[E2-3]

ICG Fluorescence Imaging allows Navigation of Critical Vessels during Laparoscopic and Robotic Colorectal Surgery

Trevor M Yeung, Wing Wa Leung, Prudence Tam, Ruby Lau, Julie Ng, Nicole Cheng, Vienna Ng, Cherry Wong, Simon Chu, Sophie S Hon, Kaori Futaba, Simon S Ng (The Chinese University of Hong Kong)

[E2-4]

Ergonomic Advantages of the Open Console System in Robotic Colorectal Resection

Chunlin Wang, Yulingming Wang, Guiyu Wang (Department of colorectal cancer surgery, the Second Affiliated Hospital of Harbin Medical University)

[E2-5]

CUSUM-Based Learning Curve Analysis of RiSSA in Robotic Left-Sided Colorectal Cancer Surgery

Shih-Feng Huang[1], Chih-Chien Wu[1,2] (1.Division of Colorectal Surgery, Kaohsiung Veterans General Hospital, 2.School of Medicine, National Yang Ming Chiao Tung University)

[E2-6]

Short term outcomes of intracorporeal anastomosis in robotic and laparoscopic left colectomy.

Yenchen Shao[1,2], Mina Mingyin Shen[1,2], William Tzuliang Chen[1,2] (1.China Medical University Hsinchu Hospital, 2.China Medical University)

[E2-7]

The long-term effects of anastomotic leakage after colorectal cancer surgery on Quality of Life – A systematic review

Gielen AHC, Heuvelings DJI, Sylla P, van Loon YT, Melenhorst J, Bouvy ND, Kimman ML, Breukink SO (CoReAL collaborative)

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[E2-1] Outcomes of NOSES vs TLRH for Right-Sided Colon Cancer: A Propensity Score-Matched Study

Zheng Xu, Yueyang Zhang, Xu Guan, Yihang Shi, Haipeng Chen, Zhixun Zhao, Zhaoxu Zheng, Haitao Zhou, Xishan Wang (Department of Colorectal Surgery, National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College)

Background: Small-incision assisted laparoscopic right hemicolectomy with intracorperal anastomosis, commonly referred to as totally laparoscopic right hemicolectomy (TLRH), represents an advanved minimally invasive technique for the treatment of right-sided colon cancer. Recently, natural orifice specimen extraction surgery(NOSES), using trasvaginal or transrectal routes, has emerged as an advanvcement that potentially minimizes abdominal wall trauma. This study compares the perioperative and long-term outcomes of NOSES and TLRH.
Methouds: A retrospective cohort of 349 patients with stage I-III right sided colon cancer who underwent curative laparoscopic resection from January 2018 to January 2023 was analyzed. Using propensity score matching(1:1), 115 NOSES cases were matched with 115 TLRH cases based on age, BMI, tumor size, neoadjuvant therapy, and T stage. Outcomes included perioperative recovery, fatigue, complications, pelvic floor function, and oncologic results.
Results: Post-matching, baseline characteristics were balanced. Operative time and blood loss were comparable. NOSES patients reported significantly less pain from postoperative days 1-3($p<0.001$), reduced analgesic use($p<0.001$) and lower fatigue levels($p<0.001$). Learning curves for transvaginal and transrectal NOSES stablilized after 57 and 41 cases, respectively. Incision-related complications were more frequent in TLRH($p<0.005$). Functional outcomes were comparable, and no differences were observed in disease-free or overall survival.
Conclusions: NOSES is a safe, effective option for selected patients with right-sided colon cancer. It provides better postoperative pain control, reduced fatigue and fewer incision-relateed complications with promising oncological outcomes.

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[E2-2] Short-term Outcomes of NOSES vs Conventional Laparoscopic Surgery in CRC

Xu Guan (Department of Colorectal Surgery, National Cancer Center/NationalClinical Research Center for Cancer/Cancer Hospital, Chinese Academy ofMedical Sciences and Peking Union Medical College)

Abstract: This multicenter RCT compared NOSES (n=234) with conventional laparoscopic surgery (CLS, n=235) in patients with stage cT1-3N0-2M0 sigmoid/upper rectal cancer. NOSES demonstrated superior recovery outcomes: significantly shorter time to first flatus (48 vs 50h, P<0.001), lower pain scores at 24/48/72h (all P<0.001), and reduced opioid analgesic requirement (17.5% vs 37.4%, P<0.001). While overall complication rates trended lower (12.0% vs 18.3%, P=0.056), major complications (Clavien-Dindo &geIII) were comparable (4.3% vs 5.1%, P=0.682). No differences were observed in oncologic safety measures including lymph node harvest (median 22 vs 21, P=0.312) or resection margins. Quality of life assessments using EQ-5D-5L showed consistent superiority for NOSES at 1/3/6 months postoperatively (all P<0.05), particularly in pain/discomfort and anxiety/depression domains. These robust findings confirm NOSES as a safe, minimally invasive alternative offering meaningful clinical benefits for appropriately selected colorectal cancer patients.

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Moderator:Atsushi Hamabe(Department of Gastroenterological Surgery Graduate School of Medicine, The University of Osaka), Mina Ming-yin Shen(Department of Surgery, China Medical University Hsinchu Hospital, Taiwan)

[E2-3] ICG Fluorescence Imaging allows Navigation of Critical Vessels during Laparoscopic and Robotic Colorectal Surgery

Trevor M Yeung, Wing Wa Leung, Prudence Tam, Ruby Lau, Julie Ng, Nicole Cheng, Vienna Ng, Cherry Wong, Simon Chu, Sophie S Hon, Kaori Futaba, Simon S Ng (The Chinese University of Hong Kong)

Introduction
This study assesses the role of Indocyanine Green (ICG) in identifying critical vessels in both laparoscopic and robotic colorectal surgery and surgeon satisfaction in the use of this technology.
Methods
This was a prospective single-center study that included patients undergoing laparoscopic and robotic surgery for colorectal cancer. A low dose of ICG was injected intravenously intraoperatively to visualize critical vascular structures, using the Visera Elite III laparoscopic system and Da Vinci Xi Firefly robotic system. Primary outcome was the identification of critical vascular structures under fluorescence imaging. Secondary outcomes included time to visualise vessels under fluorescence, any change in surgical plan, and surgeon ratings on strength of signal, ease of use, helpfulness and overall satisfaction assessed using a Likert scale.
Results
Eight patients (four right sided resections, four left sided resections) were included. ICG successfully identified critical vascular structures in all cases, with visualization occurring 22-35 seconds after injection. The optimal dose was 2.5mg. In four patients, ICG identified critical vessels which altered surgical plan, including an aberrant ascending branch of the left colic artery, an accessory vessel in close proximity to the IMV and, in two cases, the marginal artery in the mesocolon of the colonic conduit. Surgeons reported high satisfaction with the use of ICG in vessel navigation.
Conclusion
ICG fluorescence imaging is a valuable tool for identifying critical vascular structures during minimally invasive colorectal surgery, improving surgical precision and decision-making, with high surgeon satisfaction. Further studies are needed to assess its impact on patient outcomes.

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[E2-4] Ergonomic Advantages of the Open Console System in Robotic Colorectal Resection

Chunlin Wang, Yulingming Wang, Guiyu Wang (Department of colorectal cancer surgery, the Second Affiliated Hospital of Harbin Medical University)

Background: This study evaluates whether the Kangduo SR-01 (KD) open console system reduces intraoperative ergonomic strain while preserving technical performance during robotic colorectal resection.
Methods: A tripartite assessment framework was implemented: ergonomic strain quantification (Borg CR-10 Scale), team coordination evaluation (Oxford NOTECHS II), and blinded video-based technical performance analysis (OSATS).
Results: Posture during DV was significantly more challenging for Neck and back. There was a significant greater increase in discomfort over time (up to 3 h) for the neck and back in DV group compared with KD group. Notably, both systems achieved equivalent technical proficiency (OSATS, P=0.259) and maintained comparable team coordination metrics (NOTECHS II, P=0.120) with similar short-term outcomes.
Conclusions: The open console system significantly reduces musculoskeletal strain, especially for neck and back, during robotic colorectal surgery while maintaining critical technical performance.

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[E2-5] CUSUM-Based Learning Curve Analysis of RiSSA in Robotic Left-Sided Colorectal Cancer Surgery

Shih-Feng Huang[1], Chih-Chien Wu[1,2] (1.Division of Colorectal Surgery, Kaohsiung Veterans General Hospital, 2.School of Medicine, National Yang Ming Chiao Tung University)

Background
The robotic intracorporeal single-stapling anastomosis (RiSSA) technique offers a promising alternative to traditional double-stapling methods in minimally invasive colorectal surgery. However, data on its procedural learning curve remain limited.

Methods
This retrospective study assessed the first 28 consecutive robotic low anterior resections using the RiSSA technique by a single surgeon for left-sided colorectal cancer. Operative time was analyzed using cumulative sum (CUSUM) methodology to identify the learning inflection point. Patients were stratified into early (cases 1-14) and late (cases 15-28) phases. Secondary outcomes included console time, intraoperative blood loss, complication rate, and length of stay.

Results
CUSUM analysis demonstrated a learning curve inflection at case 16. Compared to the early phase, the late phase showed significant reductions in operative time (285.0 vs. 269.0 minutes, p = 0.014) and console time (194.0 vs. 146.5 minutes, p = 0.001). No major complications (Clavien-Dindo >= III) occurred in either phase.

Conclusions
RiSSA can be safely implemented with a manageable learning curve on a fully robotic platform. The technique demonstrated improved efficiency without compromising patient safety, supporting its feasibility for broader clinical adoption and training programs.

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Moderator:Atsushi Hamabe(Department of Gastroenterological Surgery Graduate School of Medicine, The University of Osaka), Mina Ming-yin Shen(Department of Surgery, China Medical University Hsinchu Hospital, Taiwan)

[E2-6] Short term outcomes of intracorporeal anastomosis in robotic and laparoscopic left colectomy.

Yenchen Shao[1,2], Mina Mingyin Shen[1,2], William Tzuliang Chen[1,2] (1.China Medical University Hsinchu Hospital, 2.China Medical University)

Background
Colo-colonic intracorporeal anastomosis (ICA) during left hemicolectomy (LH) has become a feasible option. However, its safety and efficacy remain uncertain. Therefore, this study aims to compare the short-term outcomes of ICA in laparoscopic and robotic LH.
Method
This single-center retrospective cohort study analyzed patients diagnosed with colon cancer located between the left-sided transverse colon and the descending-sigmoid junction. Eligible patients underwent ICA in laparoscopic (L-LH) or robotic left colectomy (R-LH) between January 2019 and December 2024 and met no exclusion criteria. Patients were categorized into the laparoscopic (L-ICA) and robotic (R-ICA) groups.The primary outcome measure was length of hospital stay (LOH), while the secondary outcome focused on comparing LOH among the various subgroups.
Results
A total of 93 patients were included in the final analysis (L-ICA n=66 vs R-ICA n=27). The R-ICA group was associated with significantly shorter LOH than L-ICA (5.1 days vs 7.2 days, p=0.02). Comparing to alternative anastomosis methods (Anti-peristaltic n=6 and Iso-peristaltic n=5), end-to-end subgroup (n=81) demonstrated significantly shorter LOH (5.6 days vs 13.2 days, p=0.045). Within the end-to-end subgroup, using the technique of staple plus suture (n=30) had significant shorter LOH than other techniques (n=51): 4.8 days vs 6.1 days, p=0.002.
Conclusion
ICA has proven to be a safe and feasible surgical option. Robotic ICA is associated with enhanced postoperative recovery, shorten length of hospital stay. End-to-end anastomosis using staple plus suture technique is associated with the shortest hospital stay, suggesting a potential benefit in optimizing patient outcomes.

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[E2-7] The long-term effects of anastomotic leakage after colorectal cancer surgery on Quality of Life – A systematic review

Gielen AHC, Heuvelings DJI, Sylla P, van Loon YT, Melenhorst J, Bouvy ND, Kimman ML, Breukink SO (CoReAL collaborative)

Background Colorectal anastomotic leakage remains one of the most frequent and dreaded post- operative complications following colorectal resection. However, limited research has been conducted on the impact of this complication on quality of life of patients undergoing colorectal cancer surgery. The aim of this systematic review was to identify, appraise and synthesize the available evidence regarding quality of life in patients with anastomotic leakage following oncological colorectal resections in order to inform clinical decision-making.
Methods Pubmed, Embase and the Cochrane library were searched for studies reporting on quality of life using validated questionnaires in patients with anastomotic leakage after oncological colorectal resections. The literature search was performed systematically and according to PRISMA guidelines. Outcomes of quality of life questionnaire scores of patients with and without anastomotic leakage were analysed.
Results Thirteen articles reporting on 4618 individual patients were included, among which 527 patients developed AL. Quality of life was evaluated utilizing ten distinct questionnaires administered at various postoperative time points, ranging from 1 month to 14 years. Quality of life outcomes differed across studies and time points, but overall scores were most negatively affected by AL up to twelve months postoperatively. Limitation of this study is the high heterogeneity between the included studies based on used questionnaires and time of assessment.
Conclusion The published evidence suggests that anastomotic leakage following oncologic colorectal resection is associated with impaired quality of life, especially within the first postoperative year. The impact of anastomotic leakage on quality of life warrants further evaluation and discussion with patients.