苗 2025年11月14日(金) 14:40~15:30 童 第10会場

### [E3] English Abstract Session 3 Colorectal Surgery 2

Moderator:Akihiro Kondo(Department of Gastroenterological Surgery, Faculty of Medicine, Kagawa University), Woramin Riansuwan(Colorectal Surgery Unit, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand)

#### [E3-1]

Intraoperative Peritumoral Indocyanine Green Injection During Laparoscopic Left Hemicolectomy

Alongkot Kaewkim<sup>1</sup>, Kamales Prasitvarakul<sup>2</sup> (1.Hatyai hospital, 2.Haiyai hospital)

#### [E3-2]

D3 LND improves the survival outcome in patients with cT2 colorectal cancer

Liming Wang<sup>1</sup>, Yinggang Chen<sup>1</sup>, Yasumitsu Hirano<sup>2</sup> (1.National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital & Shenzhen Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Shenzhen, 2.Division of Gastroenterological Surgery, Saitama Medical University International Medical Center, Hidaka, Saitama, Japan.)

#### [E3-3]

Tailored Minimum Examined Lymph Nodes Threshold in Colon Cancer

Baohong Yang<sup>1</sup>, Xu Guan<sup>1,2</sup>, Jian Ma<sup>2</sup>, Shuai Jiao<sup>1</sup>, Qingxia Xu<sup>1</sup>, Yanfeng Xi<sup>3</sup>, Xishan Wang<sup>1,2</sup> (1.Department of Colorectal Surgery, Shanxi Province Cancer Hospital/Shanxi Hospital Affiliated to Cancer Hospital, Chinese Academy of Medical Sciences/Cancer Hospital Affiliated to Shanxi Medical University, 2.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, 3.Department of Pathology, Shanxi Province Cancer Hospital/Shanxi Hospital Affiliated to Cancer Hospital, Chinese Academy of Medical Sciences/Cancer Hospital Affiliated to Shanxi Medical University)

#### [E3-4]

laparoscopic right hemicolectomy in obstructed hepatic flexure colon cancer, a technical challenge

Sumet Saeli (Hatyai hospital)

#### [E3-5]

Cranial-caudal-medial approach, counterclockwise complete mesocolic excision in laparoscopic right hemicolectomy- A video vignette.

Yao Zengwu, Jinchen Hu, Yifei Zhang (Yantai Yuhuangding hospital)

#### [E3-6]

Treitz ligament-guided medial approach for complete mesocolic excision in laparoscopic left hemicolectomy-A video vignette.

Yao Zengwu, Yifei Zhang, Jinchen Hu (Yantai Yuhuangding hospital)

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# [E3-1] Intraoperative Peritumoral Indocyanine Green Injection During Laparoscopic Left Hemicolectomy

Alongkot Kaewkim<sup>1</sup>, Kamales Prasitvarakul<sup>2</sup> (1.Hatyai hospital, 2.Haiyai hospital)

#### Introduction

Accurate lymph node assessment is critical in colon cancer surgery, influencing staging and treatment. Traditional lymphadenectomy relies on anatomical landmarks. Indocyanine green (ICG) fluorescence imaging allows real-time lymphatic visualization and may enhance surgical precision. We present a case using intraoperative peritumoral ICG injection during laparoscopic left hemicolectomy for descending colon adenocarcinoma.

#### Case Presentation

A 66 year old male presented with anemic symptoms. Colonoscopy demonstrated a mass at descending colon. Biopsies confirmed moderately differentiated adenocarcinoma. Preoperative computed tomography (CT) showed no distant metastases.

He underwent laparoscopic left hemicolectomy. At the beginning of the procedure, after pneumoperitoneum establishment and laparoscopic exploration, 2 mL of diluted ICG solution was injected subserosally around the tumor using a 25 gauge needle under laparoscopic vision. Following mobilization of the colon, near-infrared (NIR) fluorescence imaging was employed. The lymphatic channels draining from the tumor site were clearly visualized, and fluorescence-guided lymphadenectomy was performed along the inferior mesenteric vessels and corresponding mesocolon.

The operative time was 210 minutes with 150 mL blood loss. No intraoperative complications occurred. Postoperative recovery was uneventful, and the patient was discharged on postoperative day 4. Final pathology revealed pT3N0M0 cancer with 22 negative lymph nodes.

#### Conclusion

Intraoperative peritumoral ICG injection is a feasible, safe technique to enhance lymphatic mapping in colorectal surgery. It may improve lymph node harvest and surgical precision without significantly prolonging operative time.

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# [E3-2] D3 LND improves the survival outcome in patients with cT2 colorectal cancer

Liming Wang<sup>1</sup>, Yinggang Chen<sup>1</sup>, Yasumitsu Hirano<sup>2</sup> (1.National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital & Shenzhen Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Shenzhen, 2.Division of Gastroenterological Surgery, Saitama Medical University International Medical Center, Hidaka, Saitama, Japan.)

Background: The extent of lymphadenectomy in patients with cT2 colorectal cancer (CRC) remains controversial.

Methods: A total of 590 patients diagnosed with cT2 CRC underwent radical colorectal resection. According to the pathological type, patients were divided into the well-differentiated adenocarcinoma (WDA) group and the non-well-differentiated adenocarcinoma (nWDA) group. Each group was further divided into D3LND and D2LND groups according to the extent of lymph node dissection. The main outcomes were overall survival (OS), cancerspecific survival (CSS) and relapse free survival rate (RFS).

Results: Before PSM, there was a statistically significant difference across the cohort in OS and CSS (p=0.001 and 0.021) between D3 LND and D2 LND groups in the nWDA patients. The estimated hazard ratio (HR) was 3 (95% confidence interval (CI), 1.3-6.8, p=0.0084) for OS and 3.2 (95% CI, 1-10, p=0.047) for CSS in the D3 LND group. There was also a significant difference in OS (p=0.007) and in CSS (0.012) after matched, with an estimated HR for OS of 4 (95% CI, 1.2-14, p=0.028) and an estimated HR for CSS of 16 (95% CI, 1.2-220, p=0.034). For cT2 WDA, D2 LND had the same favorable prognosis as D3 LND before and after matching. Postoperative complications were independent risk factor for the prognosis of cT2 WDA CRC. Conclusions:

D3 LND improves survival outcomes in cT2 colorectal cancer patients with non-well differentiated adenocarcinoma. For patients with well differentiated adenocarcinoma, D3 LND should be preferentially recommended in terms of reducing perioperative complications.

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### [E3-3] Tailored Minimum Examined Lymph Nodes Threshold in Colon Cancer

Baohong Yang<sup>1</sup>, Xu Guan<sup>1,2</sup>, Jian Ma<sup>2</sup>, Shuai Jiao<sup>1</sup>, Qingxia Xu<sup>1</sup>, Yanfeng Xi<sup>3</sup>, Xishan Wang<sup>1,2</sup> (1.Department of Colorectal Surgery, Shanxi Province Cancer Hospital/Shanxi Hospital Affiliated to Cancer Hospital, Chinese Academy of Medical Sciences/Cancer Hospital Affiliated to Shanxi Medical University, 2.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, 3.Department of Pathology, Shanxi Province Cancer Hospital/Shanxi Hospital Affiliated to Cancer Hospital, Chinese Academy of Medical Sciences/Cancer Hospital Affiliated to Shanxi Medical University)

Background: This study aims to identify patient-specific factors associated with the number of ELNs retrieved in CC patients undergoing hemicolectomy and to explore the potential for establishing a minimum ELNs threshold based on patient characteristics.

Methods: We retrospectively analyzed data on patients with stage I-III CC from two sources: the Chinese Multi-Institutional Registry (N=10,367; 2010-2018) and the Surveillance, Epidemiology, and End Results (SEER) database (N=121,216; 2010-2018). We employed logistic regression modelling on the data to identify patient-specific factors associated with the number of ELNs. Subsequently, eight distinct patient cohorts were constructed within the Chinese and SEER datasets. The relationship between ELNs and overall survival (OS) was assessed continuously using restricted cubic spline (RCS) curves. Additionally, Kaplan-Meier curves were generated to estimate 5-year OS within each patient cohort.

Results: A median ELNs count of 16 (IQR: 12 - 22) and 15 (IQR: 12 - 20) was reported in the SEER and Chinese cohorts, respectively; age, tumour size, and location emerged as the specific factors influencing ELN numbers. Notably, across all eight cohorts established within the SEER database, the minimum number of ELNs required for optimal survival exceeded the current recommendation of 12, ranging from 14 - 17. Furthermore, exceeding the minimum ELNs threshold in each cohort was associated with significantly improved OS in both databases.

Conclusion: The present study reported heterogeneity in the minimum number of ELNs required across different patient cohorts undergoing hemicolectomy for CC. Further research is warranted to validate these observations and establish tailored recommendations.

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[E3-4] laparoscopic right hemicolectomy in obstructed hepatic flexure colon cancer, a technical challenge

Sumet Saeli (Hatyai hospital)

Background: Laparoscopic right hemicolectomy is a minimally invasive surgical technique used to treat right-sided colon cancers. This abstract details a case involving a patient with an obstructed hepatic flexure due to colon cancer.

Case Presentation: A 46-year-old female presented with symptoms of bowel obstruction, abdominal pain, anemia. Imaging studies revealed an obstructed hepatic flexure mass consistent with colon cancer. A multidisciplinary team evaluated the patient and determined that laparoscopic extended right hemicolectomy was the most appropriate intervention.

Surgical Technique: The procedure was performed under general anesthesia using standard laparoscopic techniques. Access was gained through insert one 12 mm trocar at umbilicus and four 5 mm trocar at RUQ,RLQ,LUQ,LLQ. The right side colon was mobilized from inferior and medial mesocolon was open ,the ileocolic vessels , middle colic vessel were ligated. An side to side anastomosis was performed extracorporeal between the ileum and the remaining colon. The operation was completed without conversion to open surgery.

Outcomes: The patient experienced an uneventful postoperative course, with a return to normal bowel function within 3 day.

Conclusion: Laparoscopic right hemicolectomy is a safe and effective approach for managing obstructed hepatic flexure colon cancer. This case highlights the benefits of minimally invasive surgery in reducing recovery time and improving patient outcomes.

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[E3-5] Cranial-caudal-medial approach, counterclockwise complete mesocolic excision in laparoscopic right hemicolectomy- A video vignette.

Yao Zengwu, Jinchen Hu, Yifei Zhang (Yantai Yuhuangding hospital)

Hohenberger proposed complete mesocolic excision (CME) to optimize oncological outcomes via central vascular ligation. Laparoscopic right hemicolectomy has shifted from lateral (open era) to medial/caudal approaches. However, medial approaches face challenges in identifying the superior mesenteric vein (SMV) in obese patients, while anatomical variations of the gastrocolonic trunk (GCT) increase bleeding risks during dissection.

We propose a cranial-caudal-medial counterclockwise CME approach:

Cranial-first: Early separation of GCT branches reduces bleeding risks.

Caudal: Safely accesses the retrocolonic space, minimizing ureteral/duodenal injury.

Medial: Facilitates SMV branch dissection with better bleeding control.

Guided gauzes are placed after cranial/caudal dissection to merge surgical planes, simplifying subsequent steps. This sequential approach enhances safety, minimizes complications, and ensures oncological efficacy in laparoscopic CME.

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[E3-6] Treitz ligament-guided medial approach for complete mesocolic excision in laparoscopic left hemicolectomy-A video vignette.

Yao Zengwu, Yifei Zhang, Jinchen Hu (Yantai Yuhuangding hospital)

Complete mesocolic excision (CME), proposed by Hohenberger, improves oncological outcomes in colorectal surgery. Left-sided CME remains challenging due to splenic flexure anatomy and Toldt's space access. We describe a Treitz ligament-guided medial approach: Toldt's space entry: Dissected between IMV and Riolan's arch, expanding retroperitoneally. Splenic flexure mobilization: Combined three-directional (medial, cranial, lateral) dissection. Medially, the gastrocolic ligament and transverse mesocolon were divided along the pancreatic edge. Laterally, the paracolic sulcus's yellow-white junction was incised. Final steps: Sigmoid artery ligation and mesocolon excision.

This method prioritizes anatomical landmarks (Treitz ligament, pancreatic edge) to simplify splenic flexure dissection, particularly in obese patients. Prior methods accessed Toldt's space near the IMA, but our approach may reduce operative difficulty. Further studies are needed to validate efficacy and safety.