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September 5-7, 2024 Grand Walkerhill Seoul, Korea

WE ARE THE COLORECTAL SURGEONS

32nd Biennial Congress of International Society of University Colon and Rectal Surgeons & 11th International Colorectal Research Summit

ISUCRS 2024 in conjunction with iCRS

Hosted by

The Korean Society of Coloproctology(KSCP)

Program at a Glance

Day 1 Sep. 5th (Thu)

Time	Room 1 Vista 1+2	Room 2 Vista 3	Room 3 Grand 4+5	Room 4 Art Hall	Grand Hall Lobby
08:00-08:30	**Opening Ceremony**				Poster Exhibition
08:30-10:00	**[Colon Cancer]** Comtroversies in Colon Cancer Treatment	**[Benign Colorectal Diseases]** All about Diverticulitis	**[KSCP-JSCP1]** Prehabilitation & Perioperative Care for Colorectal Surgery	**[Young Surgeon Forum]** We are the Past & Future Generation on the Same Road	
10:00-10:30	Break				
10:30-11:00	Harry E Bacon Oration				
11:00-12:00	**[ABSTRACT]** Free Paper 1	**[ABSTRACT]** Free Paper 2	**[ABSTRACT]** Free Paper 3	**[ABSTRACT]** Middle East	
12:00-13:00	**[Luncheon Symposium]** Medtronic	**[Luncheon Symposium]** Genomictree			
13:00-13:30	The Ahmed Shafik Award				
13:30-15:00	**[Laparoscopic Colorectal Surgery Study Group]** TME (Live Surgery)	**[Benign Anorectal Diseases]** Functional Anorectal Problems: Improving the QoL	**[Emerging Technology]** Emerging Technologies and the Future	**[Clinical Practice Guidelines Committee]** Global Updates of Clinical Practce Guideline	
15:00-15:30	Break / Video Presentation (Venue: Grand 1+2+3)				
15:30-16:00	**[KSCP]** Gold Ribbon Campaign KOR				
16:00-17:30		**[Proctology Study Group]** All about Hemorrhoids	**[Laparoscopic Colorectal Surgery Study Group]** The Best Appraoch for the Patients with Very Low Rectal Cacner	**[KSCP] [Editorial Committee]** Becoming a High Impact Journal in Colorectal Surgery KOR	
18:30	Faculty Dinner (Venue: Aston House) *Invitation Only				

Program at a Glance

Day 2 Sep. 6th (Fri)

Time	Room 1 Vista 1+2	Room 2 Vista 3	Room 3 Grand 4+5	Room 4 Art Hall	Grand Hall Lobby
07:00-08:00	**ISUCRS General Assembly**				Poster Exhibition
08:00-08:30	Registration				
08:30-10:00	**[Colorectal Cancer Study Group]** Evolving Treatment Strategies of Locally Advanced Rectal Cancer	**[Benign Colorectal Diseases]** Functional Problems after Colorectal Surgery	**[KSCP-JSCP2]** Further Developed Surgical technique with New Technology	**[KQIPS Workshop]** Practical Steps for Improving Surgical Quality and Better Outcomes KOR	
10:00-10:30	Break				
10:30-11:00	Tetsuichiro Muto Oration				
11:00-12:00	**[ABSTRACT]** Free Paper 4	**[ABSTRACT]** Free Paper 5	**[ABSTRACT]** Free Paper 6	**[KQIPS Workshop]** KQIPS Workshop for Colorectal Surgeons (Investigators) and Surgical Clinical Reviewers - How to Submit a New Subscription Application? KOR	
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13:00-13:30	The Jae Gahb Park for Outstanding Contribution to Colon and Rectal Surgery				
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15:00-15:30	Break / Video Presentation (Venue: Grand 1+2+3)				
15:30-15:50	Congress Presidential Lecture				
15:50-16:00	ISUCRS 2026				
16:00-16:30		**[KSCP-Hongkong]**	**[Colorectal Cancer]** Chemotherapy for the Colorectal Surgeon	**[AFSR, KAWOCN, and KSCP_WOSG]** Session 1. Enterocutaneous Fistula Management and Case Presentation	
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17:00-17:30					
18:30	**Gala Dinner**				

Program at a Glance

Day 3 Sep. 7th (Sat)

Time	Room 1 Vista 1+2	Room 2 Vista 3	Room 3 Grand 4+5	Room 4 Art Hall	Grand Hall Lobby
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08:00–08:30	Registration				
08:30–10:00	**[Rectal Cancer]** Dilemmas & Debates in Colorectal Surgery – Organ Preservation for Rectal Cancer	**[IBD Study Group]** Optimal Treatment for Crohn's Stricture	**[KSCP–ASEAN]** Let's Share Our Knowledge for Better Future	**[Wound & Ostomy Study Group]** Session 2. Expert Opinions for Ostomy Care	
10:00–10:30	Break				
10:30–11:00	Angelita Habr-Gamma Pioneer in Colorectal Surgery Award				
11:00–12:00	**[ABSTRACT]** Free Paper 7	**[ABSTRACT]** Free Paper 8	**[ABSTRACT]** Free Paper 9	**[ABSTRACT]** Session 3. Oral Presentation for WOCN	
12:00–13:00	**[Luncheon Symposium]** Olympus				Poster Exhibition
13:00–13:30	Philip F. Caushaj Excellency in Teaching Award				
13:30–15:00	**[Colorectal Cancer]** Curative Treatment for Oligometastasis	**[Colonoscopy Study Group]** Endoscopic Removal of Colorectal lesions	**[Special Session]** The most Exhausting & Difficullt Situations in Coloproctology	**[Wound & Ostomy Study Group]** Session 4. System and Quality Improvement for Ostomy Care and Rehabilitation	
15:00–15:30	Break / Video Presentation (Venue: Grand 1+2+3)				
15:30–17:00	**[Emerging Robotic System]** Newly Introduced Advanced Robotic Surgery Systems	**[Plevic Floor Disorder Study Group]** Consensus on Evaluation and Management of POP	**[Chemotherapy Study Group]** Recent Updates of Intraperitoneal Chemotherapy	**[Microbiome Study Group]** Germs in Our Gut	
17:00–17:20	ISUCRS Presidential Lecture				
17:30–18:00	**Closing Ceremony**				

Program

Day 1 Sep. 5th (Thu)

08:00–08:30 **Opening Ceremony** Room 1

08:30–10:00 **[Colon Cancer]** Room 1
Controversies in Colon Cancer Treatment

Chairs
Suk-Hwan LEE
Kyung Hee University, Korea
Thomas READ
University of Florida College of Medicine, USA

08:30–08:45 **Is Routine CME necessary for right sided colon cancer?** 75
Seung Yoon YANG Yonsei University, Korea

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Chang Hyun KIM Chonnam National University, Korea

09:00–09:15 **HNPCC. Partial or total colectomy** 79
Duck-Woo KIM Seoul National University Hospital, Korea

09:15–09:30 **Stage IV colon cancer. Upfront surgery or neoadjuvant therapy?** 81
Keiji KODA Teikyo University Chiba Medical Center, Japan

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Simon NG The Chinese University of Hong Kong, Hong Kong

09:45–10:00 **Discussion**

Discussant
Dong Woon LEE National Cancer Center, Korea
Byung Kwan PARK Chung-Ang University Hospital, Korea

Program

Day 1 Sep. 5th (Thu)

08:30–10:00 **[Benign Colorectal Diseases]** Room 2
All about Diverticulitis

Chairs
Taek-Gu LEE
Chungbuk National University Hospital, Korea
Pradeep P. SHARMA
Jehangir Hospital and Research Centre, Pune, India

09:45–10:00 **Discussion**

Discussant Taesung AHN Soonchunhyang University Hospital, Korea

Program

Day 1 Sep. 5th (Thu)

08:30–10:00 **[KSCP–JSCP1]** Room 3
Prehabilitation & Perioperative Care for Colorectal Surgery

Chairs
Sung–Bum KANG
Seoul National University Hospital, Korea
Eiji SUNAMI
Kyorin University, Tokyo, Japan

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Discussant
Min Hyun KIM Ulsan University, Asan Medical Center, Korea, Korea
Jung Wook HUH Sungkyunkwan Universiy, Samsung Medical Center, Korea

Program

Day 1 Sep. 5th (Thu)

08:30–10:00 **[Young Surgeon Forum]** Room 4
We are the Past & Future Generation on the Same Road

Chairs
Audrius DULSKAS
National Cancer Institute, Vilnius, Lithuania and Vilnius University, Lithuania
Yoon Dae HAN
Yonsei University, Korea

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Day 1 Sep. 5th (Thu)

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Chairs	Won Cheol PARK Wonkwang University, Korea Seong Hyeon YUN Sungkyunkwan Universiy, Samsung Medical Center, Korea	
11:00–11:10	**Comparison of Short term outcomes and Oncological Safety of Laparoscopic and Open Right Hemicolectomy in the Era of Complete Mesocolic Excision with Central Vascular Ligation(CME–CVL) for Non–Metastatic Right colon cancer** Rohith KODALI All India Institute of Medical Sciences	121

Program

Day 1 Sep. 5th (Thu)

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Program

Day 1 Sep. 5th (Thu)

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Chairs
Min Ro LEE
Chonbuk National University, Korea
Choon Sik CHUNG
Hansol Hospital, Korea

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Program

Day 1 Sep. 5th (Thu)

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Chairs Seo-Gue YOON
Seoul Songdo Hospital, Korea
Woo Yong LEE
Sungkyunkwan Universiy, Samsung Medical Center, Korea

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Hussain Abdallah AL BAHRANI
Ministry of Health Saudi Arabia, Samsung Medical Center, Saudi Arabia

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Mohammed Ahmed ALMALIK
Riyadh First Health Cluster, Saudi Arabia

11:40–12:00 Discussion

Discussant Mohammad MOUSA
Ulsan University, Asan Medical Center, Saudi Arabia

12:00–13:00 **[Luncheon Symposium]** Room 1
Medtronic

Chair Hee C. KIM
Sungkyunkwan Universiy, Samsung Medical Center, Korea

12:00–13:00 **New Era of Robotic Surgery – Innovations brought by Hugo™ RAS**
Yoshiro ITATANI Kyoto University Hospital, Japan

Program

Day 1 Sep. 5th (Thu)

12:00–13:00 **[Luncheon Symposium]** Room 2
Genomictree

Chair Jun Won UM
Korea University Hospital, Korea

12:00–13:00 **A Stool DNA–based SDC2 methylation test for the early detection of colorectal cancer in an asymptomatic, high–risk population**

Suk–Hwan LEE Kyung Hee University Hospital, Korea

13:00–13:30 **The Ahmed Shafik Award** Room 1

Chair Richard FORTUNATO
Allegheny General Hospital, USA

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Francis SEOW–CHOEN
Seow–Choen Colorectal Centre, Singapore

13:30–15:00 **[Laparoscopic Colorectal Surgery Study Group]** Room 1
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Chairs Kil Yeon LEE
Kyung Hee University Hospital, Korea
Chang Sik YU
Ulsan University, Asan Medical Center, Korea, Korea

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Ru Mi SHIN
Seoul National University Hospital, Korea

Discussant Jin KIM Korea University Hospital

Program

Day 1 Sep. 5th (Thu)

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Functional Anorectal Problems: Improving the QoL

Chairs
Doo-Seok LEE
Daehang Hospital, Korea
Parvez SHEIKH
Saifee Hospital, Mumbai, India

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Discussant	Han Deok KWAK Chonnam National University Hospital, Korea Dong Min KWAK Koo Hospital, Korea	

Program

Day 1 Sep. 5th (Thu)

13:30–15:00 **[Emerging Technology]** Room 3
Emerging Technologies and the Future

Chairs
Gyu Seog CHOI
Kyungpook National University, Korea
Kristen RUMER
Mayo Clinic, Minnesota, USA

14:45–15:00 **Discussion**

Discussant
Jae Im LEE The Catholic University of Korea, Korea
Sung Woo CHO CHA Gangnam Hospital, Korea

Program

Day 1 Sep. 5th (Thu)

13:30–15:00 **[Clinical Practice Guidelines Committee]** Room 4
Global Updates of Clinical Practice Guideline

Chairs
Jung-myun KWAK
Korea University, Korea
Keiji KODA
Teikyo University Chiba Medical Center, Japan

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Discussant	Hyo Seon RYU Korea University, Korea	

Program

Day 1 Sep. 5th (Thu)

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Video Presentation 1

Chairs
Seung-Bum RYOO
Seoul National University Hospital, Korea
Chang Hyun KIM
Chonnam National University, Korea

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Shigeki YAMAGUCHI
Tokyo Women's Medical University, Japan

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Ismail SHAFIK Cairo university, Egypt

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Program

Day 1 Sep. 5th (Thu)

15:30-17:30 **[KSCP]** KOR Room 1

Gold Ribbon Campaign
"필수의료 최전선 대장항문외과 방어전략"

Session 1.
대장항문외과: 대학병원 응급수술의 40% 책임진다

Chairs **김형록** 대한대장항문학회 회장
김길원 한국의학바이오기자협회 회장

15:30-15:40	**대학병원 응급수술 현황** **양승윤** 세브란스병원	174
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Discussant
양승윤 세브란스병원
조성우 강남차병원
정성훈 복지부 보험급여과
김지영 심평원 공공수가정책실
신은숙 심평원 포괄수가실
민태원 국민일보
이진한 동아일보
서정윤 매경헬스

Program

Day 1 Sep. 5th (Thu)

	Session 2. **대장항문외과: 정규수술 적정보상 없으면 소멸한다**	
Chairs	**강성범** 대한대장항문학회 이사장 **남우정** 대한대장항문학회 정책연구단장, 필수의료 TFT 위원장	
16:10-16:25	**양성항문질환 수가 제안** **최동현** 한사랑병원	189
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Program

Day 1 Sep. 5th (Thu)

16:00–17:30 **[Proctology Study Group]** Room 2
All about the Hemorrhoids

Chairs
Do Yeon HWANG
Seoul Songdo Hospital, Korea
Paul SELVINDOSS
Gleneagles Hospital, Malaysia

16:00–16:15	**Pathophysiology and treatment of hemorrhoids** Pradeep P. SHARMA Jehangir Hospital and Research Centre, Pune, India	212
16:15–16:30	**Hemorrhoidectomy using Advanved Energy Device** Jeehye LEE Yonsei University, Korea	213
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Discussant	Gwan Chul LEE Hansol Hospital, Korea	

Program

Day 1 Sep. 5th (Thu)

16:00–17:30 **[Laparoscopic Colorectal Surgery Study Group]** Room 3
The Best Approach for the Patients with Very Low Rectal Cancer

Chairs
George J. CHANG
MD Anderson Cancer Center, USA
Jin KIM
Korea University, Korea

16:00–16:15	**Laparoscopic TME** Yoon Suk LEE The Catholic University of Korea, Korea	220
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Program

Day 1 Sep. 5th (Thu)

16:00–17:30 **[KSCP] [Editorial Committee]** KOR Room 4
Becoming a High Impact Journal in Colorectal Surgery

Chairs
Dong Soo HAN
Hanyang University, Korea
MooJun BAEK
Soonchunhyang University, Korea

16:00–16:20	**Annals of Coloproctology: Past, Present and Future** In Ja PARK Ulsan University, Asan Medical Center, Korea	229
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Program

Day 2 Sep. 6th (Fri)

07:00–08:00 **ISUCRS General Assembly** Room 1

08:00–08:30 **Registration**

08:30–10:00 **[Colorectal Cancer Study Group]** Room 1
Evolving Treatment Strategies of Locally Advanced Rectal Cancer

Chairs
Seung-Yong JEONG
Seoul National University Hospital, Korea
Kil Yeon LEE
Kyung Hee University, Korea

08:30–08:50 **Total neoadjuvant therapy (TNT) for the treatment of locally advanced rectal cancer. Several options but what is the most effective strategy?** 237
Dong Woon LEE National Cancer Center, Korea

08:50–09:10 **Is 'Watch and Wait' a safe option after total neoadjuvant therapy (TNT)?** 238
Patricia SYLLA Mount Sinai Hospital, USA

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Richard KIM Moffitt Cancer Center, USA

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George J. CHANG
MD Anderson Cancer Center, USA

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Discussant
Yongjun CHA National Cancer Center, Korea
Soo Young LEE Chonnam National University, Korea

Program

Day 2 Sep. 6th (Fri)

08:30–10:00 **[Benign Colorectal Diseases]** Room 2
Functional Problems after Colorectal Surgery

Chairs
Kyu Joo PARK
Seoul National University Hospital, Korea
Ricardo ESCALANTE
Central University of Venezuela, Venezuela

Program

Day 2 Sep. 6th (Fri)

08:30–10:00 **[KSCP–JSCP2]** Room 3

Further Developed Surgical Technique with New Technology

Chairs
Shigeki YAMAGUCHI
Tokyo Women's Medical University, Japan
Yoon Suk LEE
The Catholic University of Korea, Korea

08:30–08:50	**Experience with the new robotic technology in colorectal surgery: Hinotori' System** Hidetoshi KATSUNO Fujita Health University, Okazaki Medical Center, Japan	279
08:50–09:10	**High quality procedure of Complete Mesocolic Excision (CME) with Central Vascular Ligation (CVL) in Robotic Colon Surgery** Jung Hoon BAE The Catholic University of Korea, Korea	282
09:10–09:30	**Extracorporeal versus Intracorporeal anastomosis in Minimal Invasive Colon Surgery: What is different?** Mamoru UEMURA Osaka University, Japan	283
09:30–09:50	**Articulating instruments in laparoscopy: Leveling the field with robotic surgery** Jung Wook HUH Sungkyunkwan Universiy, Samsung Medical Center, Korea	286
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Discussant
Ni Na YOO The Catholic University of Korea, Korea
Jong Lyul LEE Ulsan University, Asan Medical Center, Korea

Program

Day 2 Sep. 6th (Fri)

08:30–10:00 **[KQIPS Workshop]** KOR Room 4

K-QIPS: Practical Steps for Improving Surgical Quality and Better Outcomes

Chairs
Kang Young LEE
Yonsei University, Korea
Sun Jin PARK
Kyung Hee University, Korea

08:30–08:45	**The Current Status of K-QIPS** In Woong HAN Sungkyunkwan Universiy, Samsung Medical Center, Korea	289
08:45–09:00	**Program for SCR Training and Education** Ji Won PARK Seoul National University Hospital, Korea	291
09:00–09:15	**Hurdles for Data Collection** Hye Rim SEO The Korean Surgical Research Foundation, Korea	292
09:15–09:30	**Audit: How to Ensure Data Reliability** Woong Bae JI Korea University, Korea	294
09:30–10:00	**Discussion**	
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10:30–11:00	**Tetsuichiro Muto Oration**	Room 1
Chair	Kotaro MAEDA Shonan Keiiku Hospital, Japan	
10:30–11:00	**Inflammatory bowel disease associated–intestinal cancer: Nationwide database study and guidelines in Japan** Soichiro ISHIHARA The University of Tokyo, Japan	298

11:00–12:00	**[ABSTRACT]** **Free Paper 4 (Neoplasm)**	Room 1
Chairs	In Kyu LEE The Catholic University of Korea, Korea Dong Hyun CHOI Hansarang Hospital, Korea	
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11:10–11:20	**Surgical approach to splenic flexure cancer: lymph node retrieval and other surgical outcomes in extended right hemicolectomy versus left hemicolectomy; a retrospective study.** Kabhisha GUNASEKARAN Royal Perth Hospital, Australia	302

Program

Day 2 Sep. 6th (Fri)

11:20–11:30	**Exploring Comparisons in Patients Undergoing Intersphincteric Resection for Rectal Cancer: Poorly Differentiated with Signet Ring Morphology versus Well/Moderately Differentiated Adenocarcinoma** Sanjay SINGH TATA Memorial Centre, Mumbai, India	303
11:30–11:40	**Impact of Central Lymph Node Dissection with IMA High Ligation on Survival Outcomes in Laparoscopic Resection for Sigmoid Colon Cancer** Hyun Tae LIM Seoul National University Hospital, Korea	304
11:40–11:50	**Quasi-randomized controlled trial for comparing outcomes of patients and surgeon using articulating laparoscopic instruments (Artisential®) in TME during LAR.** Eun Ji PARK Kyung Hee University, Korea	305
11:50–12:00	**Protective Effect of Total Circumferential Reinforcement Sutures for Anastomotic Leakage after Minimally Invasive Surgery for Rectal Cancer** Songsoo YANG Ulsan college of Medicine and Ulsan University Hospital, Korea	306

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Day 2 Sep. 6th (Fri)

11:00–12:00 **[ABSTRACT]** Room 2
Free Paper 5 (Pelvic floor)

Chairs
Duk-Hoon PARK
Seoul Songdo Hospital, Korea
Dong Min KWAK
Koo Hospital, Korea

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11:10–11:20	**LARS scores vs POLARS, a fight or a dilemma?** Audrius DULSKAS National Cancer Institute, Vilnius, Lithuania and Vilnius University, Lithuania	309
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11:40–11:50	**Ten-year experience of surgery for external rectal prolapse: Outcomes and factors affecting disease recurrence** Ajaree SATTARATNAMAI Siriraj Hospital, Thailand	312
11:50–12:00	**The role of minimally invasive techniques in the surgery of low presacral cysts** Artem GONCHAROV Moscow Central Clinical Hospital, Russia	313

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11:10–11:20	**The use of minimally invasive techniques in performing reversal of Hartmann's procedure in patients with complicated diverticulitis** Mariia CHICHERINA Moscow Central Clinical Hospital, Russia	316
11:20–11:30	**Simultaneous laparoscopic rectosigmoid and ileocecal resections for deep multifocal endometriosis. Technical features and perioperative results.** Artem GONCHAROV Moscow Central Clinical Hospital, Russia	317
11:30–11:40	**The Incidence and Characteristics of Gastrointestinal Cancer in Patients with Inflammatory Bowel Disease in Korea; A Nationwide Population-based Study** Sung Sil PARK Hanyang University Hospital, Seoul, Korea	318

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Hayoung LEE
Ulsan University, Asan Medical Center, Korea, Korea

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Prihantini PRIHANTINI
Bandung Institute of Technology, Indonesia

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KQIPS Workshop for Colorectal Surgeons (Investigators) and Surgical Clinical Reviewers – How to Submit a New Subscription Application?

Chairs
Jeonghyun KANG
Yonsei University, Korea
Ji Won PARK
Seoul National University Hospital, Korea

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Sun Jin PARK Kyung Hee University, Korea

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Seul-gi BYEON
The Korean Surgical Research Foundation, Korea

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Youn Young PARK
Kyung Hee University Hospital at Kang Dong, Korea

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Sunseok YOON
Korea University Ansan Hospital, Korea

12:00-12:15 **Web based eCRF System for K-QIPS** 330
Oh Chul KWON MDB Inc., Korea

12:15-12:30 **Frequently asked Questions from SCR** 331
Yerim JEONG
Korea University Ansan Hospital, Korea

12:00-13:00 **[Luncheon Symposium]** Room 1
Johnson & Johnson MedTech

Chair Yoon Suk LEE
The Catholic University of Korea , Korea

12:00-13:00 **Enhancing Precision in Colorectal Surgery with Echelon 3000: A Technological Improvement**
Hyejin KIM Kyungpook National University, Korea

13:00-13:30 **The Jae Gahb Park for Outstanding Contribution to Colon and Rectal Surgery** Room 1

Chair Hyeong-Rok KIM
Chonnam National University, Korea

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Gyu Seog CHOI
Kyungpook National University, Korea

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13:30–15:00 **[Laparoscopic Colorectal Surgery Study Group]** Room 1
CME (Live Surgery)

Chairs
Hee C. KIM
Sungkyunkwan Universiy, Samsung Medical Center, Korea
Chang-Nam KIM
Eulji University, Korea

13:30–15:00 **CME (Live Surgery)** 337
Byung Soh MIN Yonsei University, Korea

Discussant
Yong Sik YOON
Ulsan University, Asan Medical Center, Korea, Korea

13:30–15:00 **[Benign Anorectal Diseases]** Room 2
All about Perianal Fistula

Chairs
Sung Hwan HWANG
Busan Hangun Hospital, Korea
Woo Jung NAM
Seoul Songdo Hospital, Korea

13:30–13:45 **Understanding the anatomy and the problems of current fistula classification** 339
Varut LOHSIRIWAT Mahidol University, Thailand

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Dong Ho CHO Seoul Songdo Hospital, Korea

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Julio del CASTILLO
Hospital Universitario Marques de Valdecilla, Santander, Spain

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13:30–15:00	**[Basic&Translational Research]** **Personalized Medicine &** **New perspectives of pathogenesis in CRC**	Room 3
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13:45–14:00	**Spatial Transcriptome Analysis for Drug Development?** Woong Yang PARK Sungkyunkwan Universiy, Samsung Medical Center, Korea	357
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14:45–15:00	**Cancer vaccines: limitations, effectiveness, and the next immunotherapy frontier** Hidenobu ISHIZAKI Cancer Institute Hospital, Japanese Foundation for Cancer Research (JFCR), Japan	364

13:30–15:00	**[KQIPS Workshop]** **Share the Past and Go to the Future Together**	Room 4
Chairs	Clifford Y. KO UCLA Health, USA Jun Won UM Korea University, Korea	
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14:00–14:15	**Preoperative Quality improvement programm (PQIP), UK** Joseph W. NUNOO-MENSAH King's College Hospital & Cleveland Clinic London, UK	371

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Chairs	Ru Mi SHIN Seoul National University Hospital , Korea Woong Bae JI Korea University, Korea	
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Day 2 Sep. 6th (Fri)

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Chair	Dursun BUGRA Koc University School of Medicine, Istanbul, Türkiye	
15:30–15:50	**Minimal Invasive Treatment of Rectal Cancer** Woo Yong LEE Sungkyunkwan Universiy, Samsung Medical Center, Korea	380

15:50–16:00	**ISUCRS 2026**	Room 1
Chairs	Woo Yong LEE Sungkyunkwan Universiy, Samsung Medical Center, Korea Jun Won UM Korea University, Korea	
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Chairs
Simon NG
The Chinese University of Hong Kong, Hong Kong
Sung–Bum KANG
Seoul National University Hospital, Korea

Program

Day 2 Sep. 6th (Fri)

16:00–17:30 **[Colorectal Cancer]** Room 3
Chemotherapy for the Colorectal Surgeon

Chairs
Dae-Yong HWANG
Konkuk University, Korea
Eung Jin SHIN
Soonchunhyang University Hospital, Korea

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Discussant	Yoon Dae HAN Yonsei University Hospital, Korea	

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16:00–17:30 **[AFSR, KAWOCN, and KSCP_WOSG]** Room 4
Session 1. Enterocutaneous Fistula Management and Case Presentation

Chairs
Ji Hyeon HWANG
Ulsan University, Asan Medical Center, Korea, Korea
Kazue YOSHIDA
Yokkaichi Nursing and Medical Care University, Japan

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Songun GU
Sungkyunkwan University, Kangbuk Samsung Medical Center

16:20–16:40 **Management Process of Enterocutaneous Fistula according to Underlying Diseases: a. Crohn's Disease, b. Surgical Factors, c. Radiation, d. Comorbidity, e. Other Factors** 407
Yoon-Hye KWON
Eulji University Uijeongbu Hospital, Korea

16:40–17:00 **Enterocutaneous Fistula Case Presentation. 1** 409
Hye Ran LEE Konyang University Hospital, Korea

17:00–17:20 **Enterocutaneous Fistula Case Presentation. 2** 411
Camelia Dou QUANZHEN
Gleneagles Hospital, Singapore

17:20–17:30 **Dicusssion**

18:30–20:30 **Gala Dinner**

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Day 3 Sep. 7th (Sat)

07:00–08:00	**KSCP General Board Meeting**	Room 1
08:00–08:30	**Registration**	
08:30–10:00	**[Rectal Cancer]** **Dilemmas & Debates in Colorectal Surgery – Organ Preservation for Rectal Cancer**	Room 1
Introductions	Joseph W. NUNOO-MENSAH King's College Hospital & Cleveland Clinic London, UK Narimantas Evaldas SAMALAVICIUS Klaipėda University Hospital, Lithuania	
08:30–08:40	**DEBATE TOPIC 1:** **Unfavourable T1 cancer after Local Excision. TME (pros) versus adjuvant therapy** Richard FORTUNATO Allegheny General Hospital, USA	421
08:40–08:50	**DEBATE TOPIC 1:** **Unfavourable T1 cancer after Local Excision. TME versus adjuvant therapy (pros)** Mark HARRISON Mount Vernon Hospital, UK	422
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Moderators for 1st debate topic	Joseph W. NUNOO-MENSAH King's College Hospital & Cleveland Clinic London, UK Soichiro ISHIHARA The University of Tokyo, Japan	
09:00–09:10	**DEBATE TOPIC 2: T2N0 Rectal Cancer TME (pros) or nCRT** Jin KIM Korea University, Korea	423
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Day 3 Sep. 7th (Sat)

09:20–09:30 **Q&A & Debate**

Moderators for 2nd debate topic

Thomas Read
University of Florida College of Medicine, USA
Narimantas Evaldas SAMALAVICIUS
Klaipėda University Hospital, Lithuania

09:30–09:40 **DEBATE TOPIC 3:**
TATME versus Robotic Surgery for low rectal cancer. My way is the best (TATME) 429

Sherief F. SHAWKI Mayo Clinic, Minnesota, USA

09:40–09:50 **DEBATE TOPIC 3:**
TATME versus Robotic Surgery for low rectal cancer. My way is the best (Robotic surgery) 430

Joep KNOL ZOL Hospital, Genk, Belgium

09:50–10:00 **Q&A & Debate**

Moderators for 3rd debate topic

Simon NG
The Chinese University of Hong Kong, Hong Kong
Dursun BUGRA
Koc University School of Medicine, Istanbul, Türkiye

Program

Day 3 Sep. 7th (Sat)

08:30–10:00 **[IBD Study Group]** Room 2
Optimal Treatment for Crohn's Stricture

Chairs
Jae Kyun JU
Chonnam National University, Korea
Emre BALIK
Koc University School of Medicine, Türkiye

08:30–08:45 **Penetrating and fibrotic Crohn's disease: How and when should intervention be decided?** 434
Takayuki YAMAMOTO
Yokkaichi Hazu Medical Center, Japan

08:45–09:00 **Endoscopic interventions for structuring Crohn's disease** 436
Soo-Young NA Incheon St. Mary's Hospital, Korea

09:00–09:15 **Strictureplasty for Crohn's Disease. Strategies to preserves bowel length and avert short bowel syndrome** 438
Yong Sik YOON
Ulsan University, Asan Medical Center, Korea, Korea

09:15–09:30 **Does anastomotic technique affects the recurrence rate of Crohn's disease after ileocolic resection?** 441
Min Soo CHO Yonsei University, Korea

09:30–09:45 **Pathophysiology and novel treatments for fibrosis or stricture** 443
Amosy E M'KOMA
Meharry Medical College and Vanderbilt University Medical Center, USA

09:45–10:00 **Case & Discussion** 446
Sohyun KIM Yeungnam University, Korea

Program

Day 3 Sep. 7th (Sat)

08:30–10:00 **[KSCP-ASEAN]** Room 3
Let's Share our Knowledge for Better Future

Chairs Soon Sup CHUNG
Ewha Womans University Mokdong Hospital, Korea
Francis SEOW-CHOEN
Seow-Choen Colorectal Centre, Singapore

08:30–08:45 **Intracorporeal vs. extracorporeal anastomosis after colon resection** 448
Carlo Angelo CAJUCOM
Jose. R. Reyes Memorial Medical Center, Philippines

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Winson Jianhong TAN
Sengkang General Hospital, Singapore

09:00–09:15 **ERAS in colorectal surgery in ASIA; how to increase implementation** 451
Siripong CHEEWATANAKORNKUL
Prince of Songkla University, Thailand

09:15–09:30 **Current status of Colorectal cancer surgery in National Cancer Center of Mongolia** 452
Rentsenbalbar GANBAATAR
National Cancer Center of Mongolia, Mongolia

09:30–09:45 **Is D3 dissection (or CME c CVL) mandatory for Right-sided colon cancer?** 453
Mina Ming-yin SHEN
China Medical University Hsinchu Hospital, Taiwan

09:30–09:45 **Discussion**

Discussant Seung-Bum RYOO Seoul National University Hospital, Korea
Jun Seok PARK Kyungpook National University Hospital, Korea

Program

Day 3 Sep. 7th (Sat)

08:30–10:00 **[Wound & Ostomy Study Group]** Room 4

Session 2. Expert Opinions for Ostomy Care

Chairs Ik Yong KIM
Yonsei University, Korea
Kotaro MAEDA
Shonan Keiiku Hospital, Japan

08:30–08:50 **Current Status for Stoma Rehabilitation** 456
Shingo TSUJINAKA
Tohoku Medical and Pharmaceutical University, Japan

08:50–09:10 **Stoma Complications: How to Manage and Prevent?** 459
Hye Youn KWON Yonsei University, Won-ju, Korea

09:10–09:30 **Surgical Management for Ostomy Complications** 461
Kil-yong LEE The Catholic University of Korea, Korea

09:30–09:50 **Practice Guidelines for Ostomy Care** 463
Mi Kyung CHO
Ewha Womans University Seoul Hospital, Korea

09:50–10:00 **Discussion**

Discussant Chan Wook KIM Ulsan University, Asan Medical Center, Korea, Korea

10:00–10:30 **Break / POSTER**

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Day 3 Sep. 7th (Sat)

10:30–11:00	**Angelita Habr-Gamma Pioneer in Colorectal Surgery Award**	Room 1
Chair	Ricardo ESCALANTE Central University of Venezuela, Venezuela	
10:30–11:00	**A pioneer in Colorectal Surgery – Honoring Professor Angelita Habr-Gama** Patricia SYLLA Mount Sinai Hospital, USA	466
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Soohyeon LEE
Soonchunhyang University Cheonan Hospital, Korea

11:40–11:50 **Synergistic Anticancer Effects of FGFR Inhibitor and Cannabidiol in Colorectal Cancer** 472

Yeonuk JU
Korea University Guro Hospital, Seoul, Korea

11:50–12:00 **Gut microbiota and metabolite profiling as candidate biomarkers for predicting poor response to preoperative chemoradiotherapy in rectal cancer** 473

Ga Yoon KU
Yeouido St. Mary's hospital, College of medicine, The Catholic University of Korea, Korea

11:00–12:00 **[ABSTRACT]** Room 2
Free Paper 8 (Pelvic floor)

Chairs Gyu Young JEONG
Hansol Hospital, Korea
Jai Hyun RHYOU
Seoul Songdo Hospital, Korea

11:00–11:10 **What Do We Know About Pelvic Floor Anatomy And Diseases?** 475

Serkan ZENGER VKF American Hospital, Türkiye

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Audrius DULSKAS
National Cancer Institute, Vilnius, Lithuania and Vilnius University, Lithuania

11:20–11:30 **Physiologic change of Rectocele repair with PSH operation** 477

Hyunun CHO Dongguk University College of Medicine, Korea

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Natthida INCHAROEN Rajavithi Hospital, Thailand

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Serkan SUCU
Koc University School of Medicine, Türkiye

Program

Day 3 Sep. 7th (Sat)

11:00–12:00 **[ABSTRACT]** Room 3

Free Paper 9 (Neoplasm)

Chairs
Hyung-Joong JUNG
Daehang Hospital, Korea
Se-Jin BAEK
Korea University Hospital, Korea

11:00–11:10 **Double tattoo technique to enhance inferior mesentery artery root lymph nodes dissection in laparoscopic anterior resection / low anterior resection.** 481

Ren-Hao CHAN
National Cheng Kung University Hospital, College of Medicine

11:10–11:20 **Endoscopic Image based machine learning model for predicting pathological response in rectal cancer after neoadjuvant therapy** 482

Jesung PARK Seoul National University Hospital, Korea

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Jeongyoon MOON Cleveland Clinic Ohio, United States

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Tae-Gyun LEE Ajou University Hospital, Korea

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Ernes John CASTRO Batangas Medical Center, Philippines

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Seijong KIM Sungkyunkwan Universiy, Samsung Medical Center, Korea

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Session 3. Oral Presentation for WOCN

Chairs Kwang Ho KIM
Ewha Womans University Seoul Hospital, Korea
Gi bong CHAE
Kangwon National University Hospital, Korea

11:00–11:10 **Withdrawal**

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Kazue YOSHIDA
Yokkaichi Nursing and Medical Care University, Japan

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Azize KARAHAN Baskent University, Turkey

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Ebru Akgun CITAK Baskent University, Turkey

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12:00–13:00	Ji Won PARK Seoul National University Hospital, Korea	

13:00–13:30	**Philip F. Caushaj Excellency in Teaching Award**	Room 1
Chair	Narimantas Evaldas SAMALAVICIUS Klaipėda University Hospital, Lithuania	
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Day 3 Sep. 7th (Sat)

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Chairs
Fidel TOUMA
Northern Health, Melbourne, Australia
Eui Gon YOUK
Good-Jang Hospital, Korea

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Chairs
Seong Taek OH
The Catholic University of Korea, Korea
Joaquim Manuel da Costa PEREIRA
Hospital de Braga, Portugal

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Chairs Hyuk HUR
Yonsei University, Korea
Jung-Ha KIM
Seoul National University Hospital, Korea

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Seoul National University Bundang Hospital, Korea
Yoon Dae HAN
Yonsei University, Korea

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Bethany MALONE Texas Health Resources, USA

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Gachon University Gil Medical Center, Korea

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Ulsan University, Asan Medical Center, Korea, Korea

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Tomas POSKUS Vilnius University, Lithuania

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Discussant
Gyoung Tae NOH
Ewha Womans University College of Medicine, Korea
Songsoo YANG
Ulsan University Hospital, Korea

Program

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Cairo University, Egypt

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Universidad Panamericana, Mexico

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Discussant Doo-Seok LEE Daehang Hospital, Korea
Heung-Kwon OH Seoul National University Bundang Hospital, Korea

Program

Day 3 Sep. 7th (Sat)

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Chungnam National University, Korea
Sung Chan PARK
National Cancer Center, Korea

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Ulsan University, Asan Medical Center, Korea, Korea

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Kyungpook National University, Korea

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The Catholic University of Korea, Korea

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Discussant
Jung Kyoung SHIN
Sungkyunkwan Universiy, Samsung Medical Center, Korea
Chang Hyun KIM
Chonnam National University Hospital, Korea

Program

Day 3 Sep. 7th (Sat)

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Keimyung University, Korea
Mauricio Ernesto Santamaria VALLE
Hospital Nacional Zacamil, El Salvador

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Konyang University Hospital, Korea

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Discussant
Ru Mi SHIN Seoul National University Hospital, Korea
Sung Sil PARK Hanyang University Hospital, Korea

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Poster Presentation

Poster Presentation

Pelvic Floor and Anorectal Disease

Poster Presentation

Wound Care & Stoma

Room 1

[Colon Cancer]
Controversies in Colon Cancer Treatment

Chairs

Suk-Hwan LEE Kyung Hee University, Korea

Thomas READ University of Florida College of Medicine, USA

Seung Yoon YANG
Yonsei University, Korea

Education

2008-2012 M.D., M.S, Kyung-Pook National University College of Medicine, Daegu, Korea
2016-2023 M.D., Ph.D, Yonsei University College of Medicine, Seoul, Korea

Professional Experience

2012-2013 Internship, Severance Hospital, Yonsei University
2013-2017 Residency, Department of Surgery, Severance Hospital Yonsei University
2017-2019 Fellow, Division of Colorectal Surgery, Department of Surgery, Yonsei University
2019- Clinical Assistant Professor, Division of Colorectal Surgery, Department of Surgery, Yonsei University

Is Routine CME necessary for right sided colon cancer?

Seung Yoon YANG

Yonsei University, Korea

The introduction of complete mesocolic excision (CME) has significantly improved oncologic outcomes following right-sided colon cancer surgery. The CME approach emphasizes sharp dissection along embryologic planes, enabling the removal of the tumor and its mesentery as a unit, thereby reducing the risk of cancer cell leakage and ensuring the removal of central lymph nodes. However, the original CME procedure lacks clear definitions for central and longitudinal radicality relative to tumor characteristics and does not highlight the importance of achieving a safe radial margin, which is a critical predictor of superior oncologic outcomes.

Currently, there are no universal standards for right-sided colon cancer resection. Surgical approaches vary across countries and institutions, ranging from the Japanese D3 dissection to modified forms of CME, which are widely used in real-world settings to accommodate the specific characteristics of each patient's tumor. The modified CME (mCME) approach for right-sided colon cancer is grounded in the original CME principles but employs a tailored strategy. This approach considers tumor location and stage, leading to an adequate RM, tailored lymphadenectomy, selective extramesocolic LN dissection, and customized mesocolon and ileal mesentery resection. While the principles of CME are essential for right-sided colon cancer, there is a pressing need to standardize the more detailed procedures to optimize patient outcomes.

Chang Hyun KIM
Chonnam National University, Korea

Education

1997-2003	Chonnam National University Medical School
2010-2011	Chonnam National University Medical School, Graduate School (Master of Medical Science)
2011-2013	Chonnam National University Medical School, Graduate School (Ph. D. in Medical Science)

Professional Experience

2007-2011	Resident, Chonnam National Univeristy Hospital
2011-2012	Fellow, Chonnam National University Hwasun Hospital
2013-2021	Assistant professor, Chonnam National University Hwasun Hospital
2020-2021	Visiting scholar of Harvard medical school, Massachusetts general hospital, system bioscience
Current	Associated professor

Optimal surgery for tranverse colon cancer in the emergency and elective setting

Chang Hyun KIM

Chonnam National University, Korea

Transverse colon cancer surgery poses unique challenges, especially given the limited number of cases managed by individual surgeons, even in high-volume centers. This limited exposure restricts the opportunity to develop extensive expertise in handling the complex and variable anatomy associated with this region of the colon. The necessity for proficiency in multiple surgical techniques, such as segmental colectomy and extended hemicolectomy, is evident, as no single approach can be universally applied across all cases.

The distinction between emergency and elective surgeries provides critical insights into the management of transverse colon cancer. Elective surgeries allow for thorough preoperative planning, often leading to more controlled surgical environments and potentially better outcomes. In contrast, emergency surgeries are characterized by urgent and often less predictable conditions, which can complicate decision-making and increase the risk of suboptimal results. These differences underscore the importance of early detection and timely intervention, aiming to shift more cases from emergent to elective settings where possible.

The insights gained from comparing elective and emergency surgical scenarios highlight the need for continued surgical education and the development of strategies to improve outcomes in both contexts. Furthermore, understanding these differences can guide future research and clinical practice, ultimately leading to more refined and effective treatment protocols for transverse colon cancer. As surgical teams continue to adapt to these challenges, the integration of lessons learned from both elective and emergency cases will be crucial in advancing the standard of care.

Duck-Woo KIM
Seoul National University Hospital, Korea

Education

1992-1998 M.D., Seoul National University College of Medicine
2001-2008 Doctor of Medical Science (Ph.D.),
Graduate School of Seoul National University

Professional Experience

Postgraduate

1998 - 2003 Internship and Residency, Seoul National University Hospital
2006 - 2007 Fellowship, Seoul National University Hospital
2007 - 2008 Fellowship, Seoul National University Bundang Hospital

Faculty Appointment

2018-present Clinical Professor
Department of Surgery, Seoul National University College of Medicine,
Seoul National University Bundang Hospital

HNPCC. Partial or total colectomy

Duck-Woo KIM

Seoul National University Hospital, Korea

Lynch syndrome (LS) is an autosomal-dominant genetic predisposition to cancer, accounting for about 1%–5% of colorectal cancer (CRC). LS is caused by an inactivating germline mutation in a mismatch repair (MMR) gene, including MLH1, MSH2, MSH6, PMS2, and EPCAM. Lynch syndrome entails a lifetime CRC risk of 60%–80% and displays distinct clinical phenotypes, such as early age of cancer onset, predominance of proximal CRC, excessive synchronous and metachronous tumors, and various extra-colonic tumors of the endometrium, ovary, stomach, small bowel, pancreas, biliary tree, brain, and urothelium.

Extended resection, such as subtotal colectomy, is generally favored over segmental resection in the curative surgery for LS patients with CRC because segmental resection entails a greater risk of synchronous and metachronous CRC. A retrospective study of LS patients with rectal cancer who underwent segmental resection found that the cumulative risk of metachronous colon cancer was 19% at 10 years, 47% at 20 years, and 69% at 30 years after surgical resection. Recent guidelines limit the use of segmental resection only to those patients for whom total colectomy is unsuitable, and only if regular postoperative surveillance is conducted. However, the appropriate surgery for each individual with LS is an open question. Rodriguez-Bigas et al. suggested that treatment must be individualized for each patient because there has been no prospective or randomized control study suggesting that extended resection confers a survival benefit compared with segmental resection. Another study suggested that less extensive surgery should be considered for elderly patients, because the increase in life expectancy achieved with total colectomy rather than segmental resection in LS patients aged 67 years was only 0.3 years.

For rectal cancer in LS, there is still debate on total proctocolectomy as a standard procedure. About 15-17% of LS patients present with cancer in the rectum and family history of rectal cancer in LS family is known to be predictive. The risk of metachronous colon cancer was reported as 15-54% after segmental resection of rectal cancer, although quality of life concerns and defecation problems are substantial.

In this session, we discuss pros and cons of extended resection and segmental resection with surveillance colonoscopy in LS. We also review the surgical guidelines for management of colorectal cancer in LS.

Keiji KODA
Teikyo University Chiba Medical Center, Japan

Education

1978-84: Chiba University, School of Medicine

Professional Experience

1984-1985 Resident in Surgery, Chiba University Hospital, Chiba
1989-1990 Research Fellow, Cancer Immunology and Surgery,
University of California, San Diego, CA (Dr. H.R. Chang)
1988-1990 Research worker,
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1990-1993 Medical Staff in the Department of Surgery I,
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1993-1998 Assistant Professor of Medicine,
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1998-2000 Associate Professor of Medicine, Department of Surgery,
Faculty of Medicine, Tsukuba University, Tsukuba
2000-2006 Associate Professor of Medicine, Department of Academic Surgery,
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2006-present Professor and Chairperson, Department of Surgery,
Teikyo University Chiba Medical Center, Chiba

Stage IV colon cancer. Upfront surgery or neo3adjuvant therapy?

Keiji KODA

Teikyo University Chiba Medical Center, Japan

Introduction: The advancement of cancer chemotherapy has led to markedly improved prognosis in Stage IV colon cancer. However, the optical timing and indication for surgery and/or chemotherapy for Stage IV colon cancer remains unclear. In Stage IV colon cancer, various clinical scenarios arise depending on the feasibility of curative resection and the presence of symptoms related to the primary lesion. This study aimed to consider how treatment strategies can be tailored to these clinical scenarios

Methods: Literature review and retrospective analysis of our cases were conducted to address the following points: 1. Whether simultaneous resection of the primary lesion and resectable liver metastases is preferable over delayed resection in Stage IV colon cancer. 2. Whether resection of asymptomatic primary lesions should be performed in cases of unresectable distant metastases. 3. Whether surgery should precede chemotherapy (upfront surgery) or vice versa (neoadjuvant chemotherapy) in potentially curable Stage IV colon cancer.

Results: Although many studies are retrospective and prone to selection bias, reports suggest that simultaneous resection contributes to favorable outcomes in Stage IV colon cancer with resectable liver metastases, although some large-scale studies indicate an increase in complications. Resection of asymptomatic primary lesions with unresectable distant metastases is currently viewed negatively. In Stage IV colon cancer with resectable liver metastases, neoadjuvant chemotherapy has shown improved progression-free survival compared to upfront surgery, although a clear extension in overall survival has not been demonstrated. This outcome may also be influenced by the presence or absence of postoperative chemotherapy. However, neoadjuvant chemotherapy appears to be beneficial for cases with extended tumor burden in liver metastases.

Conclusion: To achieve better outcomes in Stage IV colon cancer by combining surgery and chemotherapy, prospective studies with minimal selection bias regarding the timing of chemotherapy are warranted.

Simon NG

The Chinese University of Hong Kong, Hong Kong

Education

Prof. Simon Ng graduated from the medical school of The Chinese University of Hong Kong (CUHK) in 1995 with 7 distinctions and was awarded the honor degree and double Gold Medals. He passed the Joint Specialty Fellowship Examination in General Surgery in 2002 with highest marks and won the Li-Shields Medal. In 2013, Prof Ng received his Medical Doctoral Degree with Commendation from CUHK for his research thesis on the long-term outcomes of laparoscopic surgery for rectal cancer.

Professional Experience

Prof Ng's main clinical and research interests are minimally invasive/robotic surgery and advanced endoscopic therapy for colorectal diseases, multimodality treatment for colorectal cancer, colorectal cancer screening, biomarkers for colorectal cancer, and integrative medicine. He is the first colorectal surgeon in the world to perform robotic colorectal surgery using the da Vinci SP Surgical System. He has published over 250 articles in peer-reviewed journals, including first-authored publications in top-notched journals such as Lancet, Gastroenterology, and Annals of Surgery.

Room 2

[Benign Colorectal Diseases]
All about Diverticulitis

Chairs

Taek-Gu LEE

Chungbuk National University Hospital, Korea

Pradeep P. SHARMA

Jehangir Hospital and Research Centre, Pune, India

Simon CHU

Prince Of Wales Hospital, Chinese University of Hong Kong, Hong Kong

Education

2005	MBBS (HKU)
2012	FRCS (Edin), FHKAM (Surgery), FCSHK

Professional Experience

Consultant, Division of Colorectal Surgery, Prince of Wales Hospital

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Council Member, Hong Kong Society for Coloproctology

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Professional Experience

Member, Korean Society of Coloproctology

Member, Korean Surgical Society

Member, Korean Society of Endo-Laparoscopic & Robotic Surgery

Member, Korean Society of Surgical Oncology

Colonoscopy during & after acute diverticulitis. Is this beneficial or harmful?

Gi Won HA

Jeonbuk National University, Korea

Colonic diverticulitis is increasing in both of Asian and Western countries. It is a gastrointestinal disease associated with inflammation of diverticula pouches that develop along the large intestine wall. In patients with diverticulitis, it is important to exclude other colonic disease such as colon cancer, inflammatory bowel disease, ischemic colitis, or to know the characteristics of the colonic diverticula related with atypical clinical course or persistent symptoms. Although CT scan is golden standard of diagnosis for colonic diverticulitis, there are similar CT features between diverticulitis and colon cancer. Several CT features are more suggestive of diverticulitis, there are still overlapping findings suggesting colon cancer.[1] Therefore, colonoscopy is mandatory to exclude colon cancer from diverticulitis. Many studies reported increased risk of colon cancer in patients with Lt-sided diverticulitis, regardless of disease severity.[2,3,4] Furthermore, increased cancer risk is also shown in the right-sided colonic diverticulitis.[5,6] Performing colonoscopy during acute diverticulitis is another consideration due to the risk of perforation. although there is no clear evidence, the risk of macro-perforation by mechanical factors during colonoscopy must be considered. Theoretically, pathophysiology of diverticulitis is micro-perforation, there's possibility of aggravation or macro-perforation of diverticulitis.[7]

Therefore, we should consider follow-up colonoscopy after complete resolution of diverticulitis. If emergency surgery is required, oncologic surgery is recommended because of increased risk of colon cancer in patients with diverticulitis.

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6. Lee KY, Lee J, Park YY, Oh ST. Routine colonoscopy may be needed for uncomplicated acute right colonic diverticulitis. BMC Gastroenterol. 2021;21:91.
7. Angelo Zullo. Medical hypothesis: speculating on the pathogenesis of acute diverticulitis. Ann Gastroenterol. 2018;31:747-749.

Dursun BUGRA
Koc University School of Medicine, Istanbul, Türkiye

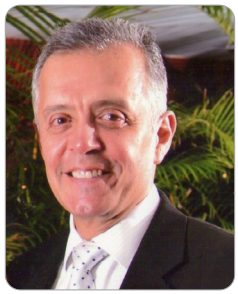
Education

1979	Graduation: Istanbul University, Cerrahpasa Faculty of Medicine
1979-1983	General surgery residency: Istanbul University, Faculty of Medicine
1985-1987	General Surgeon: SSK Istanbul Hospital
1987-2011	Attending Surgeon, Associate Professor, Professor: Istanbul University, Faculty of Medicine, Department of General Surgery,
2010-	Professor, Department of General Surgery, American Hospital, Istanbul
2012-	Professor: Koç University, School of Medicine, Department of General Surgery, Istanbul
2018-	Digestive Health Group Director & Head of General Surgery Department, Department of General Surgery, American Hospital

Professional Experience

International Society of University Colon and Rectal Surgeons (ISUCRS), Counselor to the President

Turkish Society of Colon and Rectal Surgery, Past President



Ricardo ESCALANTE
Central University of Venezuela, Venezuela

Education

General Surgeon. Central University. Caracas. Venezuela
Colorectal Surgeon. Sao Paulo University. Brasil

Professional Experience

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Vice President. International Society of Colon and Rectal Surgeons. ISUCRS

Mauricio Ernesto Santamaria VALLE
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Professional Experience

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Past-President of Salvadoran Association of colorectal Surgeons
Head of colorectal division “Hospital Nacional Zacamil ,El Salvador”
Active Member of ISUCRS
Member of the editorial board of Disease of the colon and rectum

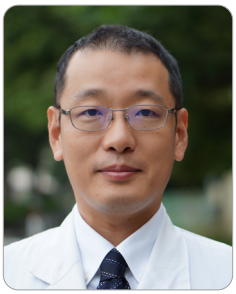
Room 3

[KSCP-JSCP1]
Prehabilitation & Perioperative Care for Colorectal Surgery

Chairs

Sung-Bum KANG
Seoul National University Hospital, Korea

Eiji SUNAMI
Kyorin University, Tokyo, Japan



Shigenobu EMOTO
The University of Tokyo, Japan

Education

1998-2004	Faculty of Medicine, The University of Tokyo (MD)
2010-2014	Graduate School of Medicine, The University of Tokyo (PhD)

Professional Experience

2004-2005	The University of Tokyo Hospital, Junior resident
2005-2009	Tokyo Metropolitan Police Hospital, Senior resident
2009-2014	The University of Tokyo Hospital, Medical staff
2014-2017	Kanto Rosai Hospital, Medical director
2017-	The University of Tokyo Hospital, Assistant professor

Clinical value of gut microbiota: targeting as next-generation biomarkers for colorectal cancer

Shigenobu EMOTO

The University of Tokyo, Japan

Background

The gut microbiota, which varies significantly between individuals, is implicated in various pathological conditions. Its role in the development and progression of colorectal cancer (CRC) has recently garnered significant research attention. In the context of locally advanced rectal cancer (LARC), preoperative chemoradiotherapy (CRT) is the widely accepted standard treatment. Predicting therapeutic effects and side effects before treatment remains challenging.

Methods

Twenty-one patients with LARC, who had no history of antibiotic or probiotic use, were included in the study. Mucosal samples from tumor and non-tumor areas, as well as stool samples, were collected both before and after CRT. Bacterial DNA was extracted and analyzed using 16S rRNA amplicon sequencing targeting the V3 and V4 regions.

Results

No significant differences were observed in α-diversity and β-diversity between non-pCR and pCR cases, nor between severe and mild diarrhea cases. There was a trend towards a higher proportion of the Fusobacterium genus in all sites post-CRT in pCR cases compared to non-pCR cases. Exploratory studies using Linear discriminant analysis Effect Size (LEfSe) to identify potential biomarkers for predicting pCR and severity of diarrhea found significant associations with higher levels of certain genera. Specifically, bacterial taxa such as Peptostreptococcus, Coprococcus, and Phoceaicola were identified as significant indicators of achieving pCR. Additionally, bacterial taxa such as Clostridium, Haemophilus, and Desulfovibrionaceae were associated with the severity of diarrhea.

Conclusions

These findings highlight the potential of gut microbiota composition as a predictive biomarker for therapeutic efficacy and treatment-related side effects in LARC patients undergoing CRT.

Ji Won PARK

Seoul National University Hospital, Korea

Education

1995-2001 Seoul National University College of Medicine

2006-2008 Graduate School of Medicine, Chungbuk National University, Master's Degree

2009-2019 Graduate School of Medicine, Chungbuk National University, Doctoral Degree

Professional Experience

2008-2013 Attending Surgeon, National Cancer Center, Korea

2013-2017 Assistant Professor, Seoul National University Hospital

2017-2022 Associate Professor, Seoul National University Hospital

2019-2020 Visiting Scholar, University of Pennsylvania

2022-present Professor, Seoul National University Hospital

Do probiotics and prebiotics have value in improving the treatment outcome of CRC?

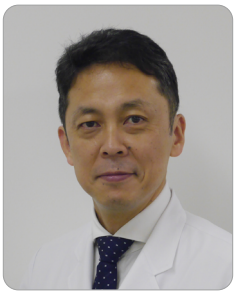
Ji Won PARK

Seoul National University Hospital, Korea

The relationship between the microbiome and colorectal cancer (CRC) is significant, with the microbiome playing a crucial role in CRC outcomes. Probiotics and prebiotics have shown potential in improving CRC treatment outcomes. Probiotics, such as Lactobacillus and Bifidobacterium, and prebiotics, which are substrates utilized by host microorganisms, can positively impact CRC treatment by modulating the gut microbiota.

The gut microbiota also influences anastomotic healing in CRC surgery by modulating local wound inflammation and repair processes. Specific microorganisms, such as Parabacteroides goldsteinii, have anti-inflammatory effects and improve gut barrier restoration and wound healing. Additionally, the gut microbiome affects the symptoms and severity of Low Anterior Resection Syndrome (LARS), a common complication after rectal cancer surgery.

Prognostic gut microbiota, including Prevotella and Fusobacterium nucleatum, serve as biomarkers for CRC prognosis. Higher abundance of Prevotella is associated with better prognosis, while certain species like Fusobacterium nucleatum are linked to poor prognosis. Personalized therapy targeting the microbiome and metabolome shows promise in improving LARS symptoms and overall CRC treatment outcomes. In conclusion, the integration of probiotics and prebiotics into CRC treatment regimens, along with personalized microbiome modulation, holds potential for enhancing treatment outcomes and patient quality of life.



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Clinical impact of muscle quality and quantity in CRC patients

Jeonghyun KANG

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Sarcopenia refers not only to the overall reduction in muscle mass but also to the decline in muscle quality. Various diagnostic methods have been proposed, and different guidelines suggest ways to diagnose sarcopenia based on the accuracy and applicability of these methods.

Following reports that skeletal muscle measured in the cross-sectional image at the L3 level of a CT scan correlates with total body muscle mass, CT-based methods for estimating muscle mass were introduced. Since most cancer patients undergo CT scans as part of surgical or chemotherapy planning, using these scans to diagnose sarcopenia would be highly beneficial. Additionally, after it was discovered that myosteatosis can be assessed within this muscle range and used to predict various clinical outcomes, related research has proliferated.

Similarly, in colorectal cancer patients, many studies aim to predict clinical outcomes by using CT scans to assess both sarcopenia and myosteatosis. There is substantial evidence that both sarcopenia and myosteatosis can be used to predict patient prognosis. However, challenges remain, such as potential differences across ethnic groups and the difficulty in establishing precise cut-off values when using CT as a prognostic tool. Therefore, further methods to overcome these challenges are needed.

Moreover, it is crucial to assess whether prediction models using body composition can help anticipate postoperative complications, which are significant outcomes after colorectal cancer surgery. While sarcopenia has been reported to aid in predicting complications in gastrointestinal surgery, and there are positive results regarding its predictive power in colorectal cancer patients, the difficulty in establishing consistent criteria poses a limitation.

Given the high utility of prediction models that use skeletal muscle area and radiodensity measured by CT, continued efforts are needed to develop more accurate models while addressing these limitations.

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Room 4

[Young Surgeon Forum]
We are the Past & Future Generation on the Same Road

Chairs

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Yoon Dae HAN Yonsei University, Korea

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Professional Experience

2018-2019 Bundang CHA Medical Center, Intern
2019-2022 Bundang CHA Medical Center, General Surgery, Resident
2022-2023 Bundang CHA Medical Center, Division of Colorectal Surgery
Clinical fellow, first year
2023-2024 Gangnam Severance Hospital, Division of Colorectal Surgery,
Clinical fellow, second year
2024-present Gangnam Severance Hospital, Division of Colorectal Surgery,
Clinical professor

Help me, What should I do? (Difficult cases with Video)

Hye Jung CHO

Yonsei University, Korea

Many young colorectal surgeons starting their career face with difficult situations everyday. Observing and assisting days are over, and every decision we make comes with great responsibility. You think that you have seen every surgery, every complication, and every peculiar cases, but once you stand up on your own, everything seems like new.

As a fledgling colorectal surgeon myself, I would like to share my experience on two difficult cases, and how I approached the patients from the initial contact at the outpatient clinic to the day of discharge postoperatively.

1. Laparoscopic subtotal colectomy

A previously healthy 33-year old female came into the outpatient clinic after being discharged from another hospital the same day. She was on postpartum day 60, and was hospitalized for intestinal obstruction for 30 days. Her computed-tomography showed multiple colonic strictures with possible diagnosis of Crohn's disease. After much discussion with the multidisciplinary team, the patient underwent laparoscopic subtotal colectomy the following day.

2. Single-Port DaVinci Right hemicolectomy

A 62-year old male came into the outpatient clinic with a complaint of abdominal pain that originated about three months prior to his visit. He underwent colonoscopy at a local clinic, and biopsy confirmed ascending colon cancer. After preoperative work-up, the patient underwent Single-Port DaVinci right hemicolectomy.

I would like to conclude my presentation with three take home messages.

1. Don't' be afraid for open conversion, incisions don't matter
2. Don't be afraid to ask for help, especially your mentors
3. Don't be afraid of failures, it's part of your experience

Sang Hee KANG
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Education

1998-2004 Korea University College of Medicine - Seoul, Republic of Korea, Doctor of Medicine

2005-2008 Korea University Graduate School - Seoul, Republic of Korea, Master of Medical Science

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Professional Experience

2004-2009 Korea University Ansan Hospital - Ansan, Republic of Korea, Intern/Resident

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2019-2023 Department of Colorectal Surgery, Korea University Guro Hospital Seoul, Republic of Kor, Associate Professor

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Social media on expanding in learning?

Sang Hee KANG

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Introduction

Medical education traditionally relies on lectures, textbooks, and clinical training. However, the emergence of digital media, particularly social media, has transformed how medical professionals learn, communicate, and stay informed. Platforms such as Twitter(X), LinkedIn, YouTube, and Facebook are now integral to medical education, offering new opportunities for knowledge sharing, community building, and continuous professional development. This shift not only revolutionizes medical education but also empowers medical professionals, giving them more control over their learning and professional growth.

The Role of Social Media in Medical Education

Social media is a powerful tool for disseminating knowledge among medical professionals. Twitter and LinkedIn facilitate the rapid spread of research findings, clinical updates, and expert insights. YouTube enhances visual learning, making complex medical procedures and concepts accessible globally. Reddit and similar forums provide spaces for in-depth discussions, peer learning, and collaborative problem-solving.

These platforms play a crucial role in fostering global communities, allowing healthcare professionals from different corners of the world to connect, share experiences, and learn from each other. This interconnectedness not only enhances collaborative learning but also ensures that medical professionals are actively engaged in their learning process, fostering a sense of belonging and connection that transcends geographical boundaries.

Case Studies in Social Media Usage for Medical Education

Several examples illustrate the practical applications of social media in medical education. Virtual Journal Clubs, for instance, have become famous for discussing and critiquing medical literature in real time, transcending geographical barriers. These clubs use platforms like Twitter to engage participants in scholarly discussions, promoting a deeper understanding of current research.

Webinars and live-streamed YouTube and Facebook Live events have also revolutionized medical education delivery. These tools enable real-time interaction between presenters and audiences, creating dynamic learning environments. Additionally, social media plays a crucial role in mentorship and peer learning, with platforms like LinkedIn and Twitter serving as bridges that enable young professionals to connect with experienced mentors, seek advice, and enhance their clinical skills, thereby fostering continuous professional development.

Challenges and Solutions in the Use of Social Media

Despite its benefits, social media in medical education faces challenges, particularly regarding information reliability. The open nature of these platforms can lead to the spread of misinformation, which is problematic in clinical settings. To combat this, medical professionals must develop critical solid appraisal skills and rely on trusted sources when using social media for educational purposes.

Privacy and ethical concerns are also significant, especially regarding patient information. Strict adherence to ethical guidelines is essential to protect patient privacy and confidentiality. Medical professionals must be educated on safe and ethical social media practices to mitigate these risks.

The Future of Social Media in Medical Education

The integration of advanced technologies like artificial intelligence (AI) and machine learning (ML) with social media platforms presents significant potential for the future of medical education. These technologies can curate personalized learning experiences, analyze vast datasets for educational insights, and simulate clinical scenarios for training. As AI and ML continue to evolve, they will play a crucial role in revolutionizing the future of medical education, sparking excitement about the possibilities that lie ahead.

Conclusion

Social media has expanded the scope of medical education, providing innovative ways to learn, share knowledge, and connect with peers globally. For specialists in fields such as colorectal surgery, these platforms are invaluable resources for continuous learning and professional development. As social media continues to evolve, embracing these tools while addressing their challenges will be essential to maximize their educational benefits.

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Education

2009-2015 Korea University, College of Medicine
2018 International Observership, Presbyterian Weil Cornell Medical Center, New York
2018-2020 Master of Medicine, The graduate school of the University of Ulsan
2023 International Observership, Tokyo Yamate Medical Center, Tokyo, Japan
2023-Current Doctor of Philosophy, The graduate school of the Korea University

Professional Experience

2016-2020 Resident, General Surgery, Asan Medical Center, Seoul, Korea
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Life of CRS and our view on GenZ Surgeon - Korea -

Hyo Seon RYU

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The field of colon and rectal surgery has undergone significant changes over the past few decades, driven by advancements in technology, shift in patient expectations, and the emergence of new generations and rapidly changing healthcare environments and policies. As an MZ generation surgeon standing at the intersection between the seasoned experience of my senior teachers and the fresh perspectives of Gen Z Surgeons, reflect on the changing landscape of our profession and the distinct characteristics that define the new generation of surgeons entering the field.

Colorectal surgeons play vital and essential role at the heart of essential healthcare, particularly in emergency surgery and critical care. Traditionally, the knowledge and experience of senior surgeons has led to many advances in surgical techniques and outcomes and has established the current state of colorectal surgery. Colorectal surgeons are responsible for lives of many critically ill patients, which can be very rewarding, and there are many career opportunities, including endoscopy and surgery for many benign conditions that directly affect a patient's quality of life. However, heavy workloads, rising patient expectations and the burden of medical litigation due to a patient—doctor relationship altered by misguided healthcare policies clash with the values of Gen Z surgeons, who value work-life balance. Gen Z's view of work-life balance is that it doesn't detract from their professional commitment, but rather helps them improve efficiency and patient care by promoting well-being and preventing burnout.

Gen Z surgeons are digital natives, inherently comfortable with the latest technological advancements such as robotic surgery, minimally invasive techniques, and AI-driven diagnostic tools. Their ability to quickly adapt to these technologies positions them as key players in the future of our field. Furthermore, individual diversity is currently being celebrated to a greater extent than ever before among members of Gen Z. With regard to careers and employment, they exhibit less concern with matters of stability, income, and specifications, and a greater interest in pursuits that align with their values and interests. They are characterized by a rationalistic and individualistic outlook, and a commitment to social issues, which manifests in tangible action. The current healthcare crisis in Korea provides an illustrative example of how Gen Z differs from past generations in their approach to expressing opposition and anger over the misguided medical school expansion policy.

The invaluable experience and wisdom of senior surgeons are critical in guiding the next generation. Mentorship will play major role. It is not just about the accumulation of skills and knowledge; it is also about equipping the younger generation with the tools to navigating the challenges they will face, including the complexity of the healthcare system, work-life balance, and emotional pressures. Intergenerational collaboration and mutual understanding are vital for the continued advancement of colorectal surgery.

Kristen RUMER

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Biography

Kristy Rumer M.D., Ph.D., F.A.C.S is a Colorectal Surgeon Scientist and Assistant Professor of Surgery at the Mayo Clinic in Rochester, Minnesota. She earned her MD/PhD at the University of Colorado before completing her general surgery residency at Stanford University. She completed her Colorectal surgery fellowship at Cleveland Clinic in Florida. In her clinical practice she treats the full spectrum of colorectal diseases. She is the Director of the High-Resolution Anoscopy Clinic at Mayo Clinic, Rochester. Additional areas of clinical focus are inflammatory bowel disease and surgical prehabilitation. Dr. Rumer runs a translational science lab focused on understanding immune-epithelial interactions perianal fistulizing Crohn's disease. Her work aims to improve treatments in inflammatory bowel disease. Dr. Rumer is an Exectuive Board Member of ISUCRS and co-editor of the society journal, World Journal of Colorectal Surgery.

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Professional Experience

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2022	Staff Surgeon, Vice-Chair, Clinic for Gastrointestinal and Colorectal Surgery (Chair: Dr. Michael J. Lipp), Department of Surgery (Director: Prof. Dr. Karl-J. Oldhafer)
2023	EBSQ-Exam in Coloproctology passed, Fellow of the European Board of Surgery (Coloproctology) ESCP Meeting Vilna: Lars Påhlman Medal Award (European Society of Coloproctology)

Seon Hahn KIM

Universiti Malaya Faculty of Medicine, Malaysia

Professional Experience

Dr. Kim Seon Hahn is Professor and Consultant colorectal surgeon working at Department of Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia, as his new academic position appointed in Sep 2022. He had been Professor of Colorectal Division, Department of Surgery at Korea University Anam Hospital, Korea University College of Medicine, Seoul, Korea (2006-2022). He has been specifically interested in robotic and minimally invasive surgery and surgical anatomy in the colorectum during 30 years

Research Field

Prof. Kim has performed more than 3500 laparoscopic colon and rectal resections and over 1000 robotic rectal resections, mainly for cancer. He performed many live robotic and laparoscopic surgeries at various international congresses and at oversea hospitals. He was honored to give several orations such as; the 'BJS Lecture' at the 2015 Congress of European Society of Coloproctology in Dublin, the very first 'Yasunobu Tsujinaka Memorial Oration' at the 27th Annual Jagelman/37th Turnbull International Colorectal Symposium 2016 held in Florida, 'The William Hugh Isbister Lecture' at the 2019 Saudi-International Colorectal Diseases Forum in Riyadh, Saudi Arabia, and 'Dr. Pradeep Chowbay Oration' at Indian Association of Gastrointestinal Endosurgeons (IAGES) 2023 Midterm Conference in Bhopal, India.

Room 1

Harry E Bacon Oration

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CRS Residency Program Director
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Room 1

[ABSTRACT]
Free Paper 1 (Basic Research)

Chairs

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Byung Chun KIM Hallym University Medical Center, Korea

Development and validation of automated deep learning model for acute appendicitis in non-contrast enhanced computer tomography

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The diagnosis of acute appendicitis in urgent patients unable to undergo contrast-enhanced CT could burden the emergency medical system (EMS). We developed a fully automated diagnostic framework for such patients using 3D convolutional neural network (CNN).

We collected clinical information and non-enhanced phase images from contrast-enhanced CT scans of patients suspected of acute appendicitis within EMS. The volume of interest, localized between 5 cm above the iliac crests and the sacroiliac joint, was automatically extracted and verified through exploratory data analysis. The dataset was divided into training, validation, and testing sets in a 7:1:2 ratio. We applied transfer learning, using parameters and the dataset from an Information of Appendix model pre-trained with enhanced CT images, to develop the final model. The 3D CNN model, equipped with a two-stage binary classification algorithm, diagnosed three labeled classes: non-appendicitis, simple appendicitis, and complicated appendicitis. External validation was conducted using a dataset of patients unable to receive contrast material in real EMS. We evaluated the overall model performance using sensitivity, specificity, F1 score, and AUC, with image features analyzed via gradient-weighted class activation mappings.

The dataset comprised 3,064 cases, categorized as non (52.8%), simple (38.5%), or complicated appendicitis (8.7%). DenseNet169 achieved the highest performance among all models. In internal testing, the first stage predicted appendicitis with a sensitivity, specificity, and AUC of 77.2%, 66.6%, and 0.78, respectively. The second stage identified complicated appendicitis with a sensitivity, specificity, and AUC of 86.9%, 90.0%, and 0.94, respectively. In external validation, the first stage achieved a sensitivity, specificity, F1 score, and AUC of 74.1%, 83.3%, 69.0%, and 0.80, respectively, which were 92.9%, 92.3%, 92.3%, and 0.95 in the second stage.

This ongoing study suggests that 3D CNN could assist in the diagnosis of acute appendicitis in urgent patients unable to undergo contrast-enhanced CT, especially in complicated.

keyword

Acute appendicitis, Non-Contrast, Computed tomography, Convolutional neural network

Intraoperative Bowel Perfusion Assessment by Indocyanine Green Fluorescence imaging for Laparoscopic Colorectal Surgery

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Background

Anastomotic leakage is one of the most serious complication of colorectal surgery associated with a significant increase in mortality and morbidity after operation. Anastomotic leak rates in colorectal surgery are estimated at around 1-20%. Surgery related factors for anastomotic leakage have been reported to be incomplete anastomosis, anastomotic tension and vascular perfusion. Conventionally, bowel perfusion is assessed intraoperatively based on various indicators, including tissue color, active bleeding from resection margin and palpable mesenteric arterial pulsation. However, surgeon's judgment of these clinical indicators to be highly unreliable. On the other hand, Near-infrared fluorescence imaging with Indocyanine green is provides that enables real-time assessment of bowel perfusion during minimally invasive surgery /Laparoscopic and Robotic surgeries/. Most researched method is indocyanine green fluorescence angiography. This procedure requires the injection of non-targeted fluorescent agent and subjective intraoperative assessment of perfusion by the surgeon.

Method

The laparoscopic camera system we used for near-infrared observation had to be Olympus Visera Elite II 3D endoscopic camera system. The blood perfusion evaluated immediately before and after performing anastomosis. Intravenously, 7.5mg of ICG /3.0 ml of ICG solution, the dilution as one 25mg vial in 10 ml saline/.

Result

The perfusion of anastomotic site observation performed was 25-39 seconds in after NIR agent injection. it was judged to be good perfusion. In this cases, there was no intraoperative surgical plan and resection site was changed and anastomotic leakage at 30 day after operation.

Conclusion

In conclusion, ICG fluorescence bowel perfusion assessment is a feasible method to avoiding anastomotic leak complication and it can be reducing mortality rate in colorectal surgery.

Clinicopathological factor affecting TMB status in MSS colorectal cancer cases

Tomoya SUDO, Kenji FUJIYOSHI, Satoshi SHIMAMURA, Kahori HISADA, Hirona SHIGYOU, Maako KIKUCHI, Takahiro SHIGAKI, Naohiro YOSHIDA, Kenichi KOSHI, Takefumi YOSHIDA, Fumihiko FUJITA

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Background (Aim)

The companion diagnostic criteria for immune checkpoint inhibitors (ICIs) include microsatellite instability (MSI) and tumor mutation burden (TMB) >10/Mb (TMB_high). While comprehensive genomic profiling (CGP) tests have identified some cases with microsatellite stability (MSS) and TMB_high, prompting consideration for ICI therapy.

The study aims to clarify the comprehensive clinicopathological characteristics of MSS and TMB_high cases undergoing CGP testing.

Materials And Methods

In total, 50 cases with recurrent colorectal cancer, who underwent CGP followed by an expert panel. The xml files from the tests were obtained, and information on gene transcr!pt, short-variant allele fraction cds-effect, functional effect, position, and protein effect was extracted. A statistical comparison of clinicopathological factors was conducted between the MSS with TMB_low group and with TMB_high group.

Results

The median age of the cases was 61 years, 28 males and 22 females. Tumor locations were 11 in the right and 39 in the left side. The disease stages at diagnosis were Stage I/II/III/IV in 2 (4%), 3 (6%), 19 (44.7%), and 26 (52%) cases, respectively. Thirty-three cases (66%) had a history of chemotherapy for the samples submitted for CGP. The median number of treatment lines was 3.5±7.17.

The median number of variants was 14±6.74, with most variants being missense. The genes with the most variants observed were APC/TP53/KRAS, followed by NOTCH3/ERBB4/MLL2. In the comparison between the MSS with TMB_high group and with TMB_low group, factors like tumor location, gender, RAS status, alcohol history, and smoking history were expected to have an impact, but no statistical correlation was found. On the other hand, the number of regimens administered before the CGP test showed a significant association with TMB_high.

Conclusion

There may be an influence of chemotherapy on TMB in MSS colorectal cancer.

Analysis of postoperative inflammation indexes and prognosis in patients with colorectal cancer: a propensity score matching study

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Background

Although there is an increasing number of reports analyzing the prognostic values of preoperative inflammation indexes in gastrointestinal cancer, few reports have evaluated the postoperative inflammation indexes. We investigated whether the postoperative inflammation indexes are useful for predicting the prognosis after colorectal cancer (CRC) surgery.

Methods

We included 234 patients with CRC of Stage I-III who underwent radical surgery between January 2016 and December 2018 in our hospital. The NLR (Neutrophil-lymphocyte ratio), PLR (Platelet-lymphocyte ratio) and LMR (Lymphocyte-monocyte ratio) at one month after surgery were calculated and classified into two groups (low and high group) according to cut-off values derived from ROC curves. The relationships between postoperative inflammation indexes and prognosis were analyzed using Cox proportional hazards model and propensity score matching.

Results

Postoperative NLR was correlated with age (p=0.046), Tumor depth (p=0.02) and lymphatic invasion (p=0.01). Postoperative PLR and LMR were not associated with any clinicopathological findings. Cox proportional hazards model analysis for overall survival, lymph node metastasis (p=0.002), venous invasion (p=0.01), lymphatic invasion (p=0.045), histology types other than well differentiated (p=0.04), high postoperative NLR (p=0.004) and, high postoperative PLR (p=0.002) were prognostic factors. In multivariate analysis showed that only the high postoperative NLR was an independent poor prognostic factor (p=0.03, HR 3.03, 95%CI 1.41-6.51). After propensity score matching, 84 patients were included in each group. In univariate analysis, lymph node metastasis (p=0.02), venous invasion (p=0.04), lymphatic invasion (p=0.04), and high postoperative NLR (p=0.01) were prognostic factors. In multivariate analysis, only the high postoperative NLR were prognostic factors (p=0.01, HR 2.94, 95%CI 1.28-6.77).

Conclusion

Postoperative NLR values of one month after surgery was an independent poor prognostic factor. Postoperative inflammation indexes can be a useful prognostic marker for CRC.

Perception Change in Operating Room Nurses on the Climate Crisis and Sustainable ORs through Education

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Background

With the escalating climate crisis, activities aimed at mitigating this crisis are gaining attention, and these discussions are active within the healthcare sector. This study targeted operating room nurses at Seoul National University Bundang Hospital, providing education on sustainable operating rooms and conducting surveys before and after the education sessions to assess nurses' perceptions and evaluate the impact of the education.

Methods

The study involved 77 operating room nurses. An educational session was conducted on December 27, 2023. The survey had 19 items before the education and 16 items after, based on a previous study's survey, with three baseline questions answered only pre-education. The questions covered perceptions, knowledge, concerns, and willingness to change regarding the climate crisis and sustainable operating rooms.

Results

Responses from 75 nurses were analyzed. Among respondents, 73.3% were female, 36% were in their 20s, and 45.3% in their 30s, with the majority (36%) having 5-10 years of work experience. Most respondents already recognized the climate crisis's severity before education. The knowledge section showed significant change: 82.7% were unaware of the healthcare sector's contribution to global greenhouse gas emissions pre-education, which dropped to 2.7% post-education. Willingness to reuse gowns and surgical instruments increased significantly post-education (41.3% to 73.3% for gowns, 50.7% to 80.0% for instruments). Major pre-education barriers to sustainable operating rooms were cost-effectiveness (34.7%) and lack of resources (32%). Post-education, the main barrier shifted to lack of guidelines and information (28.0%). Over 90% of respondents indicated that transitioning to sustainable operating rooms would increase their workload.

Conclusion

Nurses are aware of the climate crisis's severity and agree on the need for sustainable operating rooms. Education can enhance this awareness, but concerns about increased workload due to the sterilization process highlight the need for mitigating strategies.

Utilizing PROTAC to degrade Polo-like kinase 1 proteins and inhibit tumor growth in colorectal cancer

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Polo-like kinase 1 (PLK1) controls multiple stages of cell-cycle progression. PLK1 is characterized by a C-terminal Polo-Box domain (PBD), which mediates protein interactions, the subcellular localization and regulates the N-terminal serine/threonine kinase domain. In human colorectal cancer, PLK1 is expressed at higher levels in tumors compared to paired normal mucosa and several studies showed PLK1 supporting a key role for PLK1 in colorectal carcinogenesis. Herein, we present the proteolysis targeting chimera (PROTAC) for PLK1 degradation, targeting the Polo-box domain (PBD). To confirm PLK1 expression in colon cancer cell lines, we performed western blotting and found high expression in SW620, HCT11, and HT29 cell lines. Also, We identified DD-2 as the most potent PROTAC that selectively induces PLK1 degradation in colorectal cancer cells, including HCT116, HT29. In vitro study shows that treatment of colon cancer cell lines with PROTAC resulted in G2/M arrest and also marked apoptosis at a concentration of 25uM. Therefore, the results showed that inhibition of PLK1 by PROTAC in colorectal cancer is a good candidate for anticancer drug that can inhibit the growth of colon cancer.

keyword

Colorectal cancer, PLK1, PROTAC, Target protein degradation, Anticancer drug

Room 2

[ABSTRACT]
Free Paper 2 (Neoplasm)

Chairs

Won Cheol PARK
Wonkwang University Hospital, Korea

Seong Hyeon YUN
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Comparison of Short term outcomes and Oncological Safety of Laparoscopic and Open Right Hemicolectomy in the Era of Complete Mesocolic Excision with Central Vascular Ligation)CME-CVL) for Non-Metastatic Right colon cancer

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Background

Right hemicolectomy performed in accordance with the principles of complete mesocolic excision (CME) and central vascular ligation (CVL) has shown improved oncological outcomes. Nevertheless, the adoption of laparoscopic CME-CVL right hemicolectomy has not been widespread. This study compares the short-term and pathological outcomes between laparoscopic and open CME-CVL right hemicolectomy.

Methods

A prospective analysis of all patients who underwent laparoscopic or open CME-CVL right hemicolectomy for non-metastatic right colon cancer in a tertiary hospital between January 2020 to August 2023. Demographic, intraoperative, postoperative data (30-day), and histopathological data have been compared.

Results

A total of 90 patients were enrolled in the study, with 45 undergoing laparoscopic and 45 undergoing open CME-CVL right hemicolectomy. No disparities were noted in demographic characteristics between the two groups. In terms of the operative procedure, the laparoscopic group exhibited a longer operative time compared to the open group (160 ± 20.94 vs. 120 ± 18.3, p-value <0.001). Significant differences were observed in postoperative pain, with a lower Visual Analog Scale (VAS) score in the laparoscopic group (5 vs. 7), as well as in the initiation of early oral intake (3 vs. 5 days) and length of hospital stay (6 vs. 10 days) (p-value <0.001). Both groups demonstrated similar R0 resection rates and the number of lymph nodes harvested (p=0.667 vs. p=0.620). No significant difference was found in the rate of an intact mesocolic plane (p=0.881).

Conclusion

Laparoscopic CME-CVL right hemicolectomy offered certain benefits in terms of short-term outcomes when compared to the open approach. Pathological outcomes did not show significant distinctions between the two methods. Future studies should delve into a more comprehensive evaluation of their long-term results.

SELective defunctioning Stoma Approach in low anterior resection for rectal cancer (SELSA): A prospective study with a nested randomized clinical trial investigating stoma-free survival without major LARS following total mesorectal

Pamela BUCHWALD[1], Martin RUTEGÅRD[2], Martin LINDSKÖLD[3], Fredrik JÖRGREN[3], Kalle LANDERHOLM[4], Peter MATTHIESSEN[5], Jennifer PARK[6], Jacob ROSENBERG[7], Johannes SCHULTZ[8], Josefin SEGELMAN[9], Pamela BUCHWALD[1]

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Background

Accumulating data suggest that systematic use of defunctioning stoma after low anterior resection for rectal cancer causes kidney injury, bowel dysfunction, and higher rate of permanent stomas. We aim to study whether a selective stoma strategy might lead to fewer adverse consequences, while still being safe for patients.

Methods

SELSA is a multicentre international prospective observational study nesting an open-label randomized clinical trial. Patients with primary rectal cancer planned for curative low anterior resection are included in a cohort study. Patients aged <80 years, with an American Society of Anesthesiologists' fitness grade I or II and a low predicted risk of anastomotic leakage will be randomized 1:1 to no defunctioning stoma (experimental arm) or a defunctioning stoma (control arm). The primary outcome is the composite measure of 2-year stoma-free survival without major low anterior resection syndrome (LARS). Secondary outcomes include anastomotic leakage, postoperative mortality, reinterventions, stoma-related complications, quality of life measures, LARS score, and permanent stoma rate. To be able to state superiority of any study arm regarding the main outcome, with 90% statistical power and assuming 25% attrition, we aim to enrol 212 patients. Patient inclusion will commence in 2024.

Conclusion

The SELSA study is investigating a tailored approach to defunctioning stoma use in low anterior resection for rectal cancer in relation to the risk of anastomotic leakage. Our hypothesis is that long-term effects will favour the selective approach, enabling some patients to avoid a defunctioning stoma.

Trial registration

Swedish Ethical Review Authority approval (2023-04347-01) and ClinicalTrials.gov (NCT06214988).

A prediction model for enhanced recovery after surgery failure following laparoscopic colectomy

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[1]Inje University Haeundae Paik Hospital, Korea

[2]Department Of Surgery, College Of Medicine, Chungnam National University, Korea

Background/Aims

The effectiveness of the enhanced recovery after surgery (ERAS) protocol in colorectal surgery has been well documented and is now widely used. Nonetheless, some patients fail to recover despite adherence to the ERAS protocol. Identifying patients at risk of ERAS failure remains a challenge. Therefore, this study aimed to develop a prediction model for ERAS failure following laparoscopic colectomy.

Methods

A retrospective analysis was conducted on data from patients who underwent laparoscopic colectomy between September 2020 and February 2023. All patients were subjected to the ERAS protocol of our institution and were divided into two groups based on success or failure. ERAS failure was defined as intolerance of a soft diet on postoperative day 2, postoperative length of stay exceeding 7 days, or readmission within 30 days after surgery. Multivariate logistic regression analysis was employed to develop the prediction model.

Results

The study included 401 patients, with 45 (11.2%) experiencing ERAS failure. Body mass index (BMI), operative time, and C-reactive protein-to-albumin ratio (CAR) were identified as independent parameters affecting ERAS failure in multivariate logistic regression analysis. Consequently, these parameters were selected to develop the prediction model for ERAS failure. Receiver operating characteristic (ROC) curves were generated for these parameters. The area under the curve (AUC) values for BMI, operative time, and CAR were 0.650, 0.652, and 0.683, respectively. Upon integrating the three parameters and plotting the ROC curve, the AUC value improved to 0.771.

Conclusion

While BMI, operative time, and CAR exhibited predictive potential individually, their AUC values were relatively low. Combining these variables enhanced the prediction capability for ERAS failure following laparoscopic colectomy.

Extended resection v/s Palliative treatment in advanced Colo-Rectal Cancer

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Surgery, University Hospital, Medical University, Bulgaria

Background

Colorectal carcinoma (CRC) is one of the most widespread malignancies worldwide - the third most common cancer. Bowel obstruction (with or without perforation) is a challenging problem, and one of the most common reasons for emergency surgery in patients with advanced CRC, characterized with high morbidity and high mortality rate.

Design

Retrospective study of 563 patients with CRC aged between 23 and 97 years.

Aim

Analysis of the therapeutic procedures and outcome - major resections or palliative procedures. Identification of the risk factors connected with poor prognosis.

Results

Distribution according to location: colon – 404 (sigma - 149, cecum & c. ascendens – 93, c. descendens – 68) and rectum 159 patients. Therapeutic strategy was mainly determined by location of the tumor, clinical stage, complications (obstruction, perforation, peritonitis) and performance status.

Curative resections performed in 74,8% (extended resections in 24,0%) and palliative interventions in 25,2%. Conservatively treated - 42 (followed by elective surgery in 36). Postoperative complications found in 26,9% and postoperative mortality was 5,6%.

Therapeutic strategy in those patients could one of the most challenging clinical scenaria, balansing between advantages/benefits and disadvantages of surgical interventions and procedures, there prognosis and outcome, tumor biology and last but not least, the quality of life of the patients.

Conclusion

Surgery is the cornerstone of CRC cancer treatment. There are several possible reasons for poor prognosis and outcome: advanced stage of cancer, need for more extensive surgery, more of the patients are elder or advanced age, presence of severe co-morbidity. As a whole patient with BO carry greater risk of poor outcome from the therapeutic procedures and they have shorter surveillance and survival rate, compared with those without complicated course of CRC.

Feasibility of Constructing an External Control Arm for Stage III Colon Cancer Using Korean Medical Data: A Study Comparing FOLFOX4 Regimen and Cetuximab Combination Based on PETACC-8

Changhyun KIM,

Chonnam National University Hwasun Hospital, Korea

With the accumulation of extensive medical data and advancements in data processing technology, there is an increasing effort to utilize patient-level data-based external control arms in clinical trials for cancer drugs or orphan disease treatments. This study aims to assess the feasibility of constructing and utilizing an external control arm based on Korean data, reflecting the trends of such clinical studies.

To achieve this, we replaced the control arm of the PETACC-8 study (NCT0026581) with an external control arm based on Individual Patient Data (IPD) from Chonnam National University Hwasun Hospital and compared and evaluated the actual clinical trial results. PETACC-8 is a large-scale clinical trial that compared overall survival (OS) and disease-free survival (DFS) between the FOLFOX4 monotherapy group and the cetuximab combination group in stage III colon cancer patients, confirming that there was no significant difference in OS and DFS between the two groups. Utilizing this clinical trial information, we constructed an external control arm based on IPD from Chonnam National University and evaluated the similarity of OS and DFS between the FOLFOX4 monotherapy group of the PETACC-8 and the external control arm.

This study demonstrates that it is possible to construct a reliable external control arm based on data from domestic medical institutions, which can be submitted to domestic and international regulatory agencies. This suggests that external control arms based on domestic IPD can be utilized in future clinical trials for rare and intractable diseases where randomized controlled trials are challenging. Furthermore, if sufficient patient information is provided, these external control arms can be used in clinical trials to compare standard treatments with new therapies.

Impact of Proteinuria Changes on Increasing the Incidence of Colorectal Cancer: Evidence from a Nationwide Cohort Study

Soo Young OH, Won-Kyung Kang

Yeouido St. Mary's Hospital, College of Medicine, Korea

Background and Aim

Several reports have suggested an association between proteinuria (PU) and malignancy, with a noted increased risk of incident colorectal cancer. However, the effect of changes in PU status on colorectal cancer risk remains unclear. We aimed to investigate the effects of changes and persistence in PU status on colorectal cancer risk.

Methods

This nationwide cohort study included 3,043,148 adults without cancer who underwent two consecutive biennial health screenings provided by the Korean National Health Insurance System (NHIS) between 2010 and 2012 and were followed up until 2022. Dipstick urinalysis was used for testing, and patients with overt proteinuria (PU) (more than 1+) were classified as having proteinuria. Participants were categorized according to the change in proteinuria status: PU-free, PU-developed, PU-recovered, and PU-persistent.

Results

The median follow-up period was 9.19 years, during which 36,846 individuals developed colorectal cancer. Compared with the PU-free group, the PU-persistent group had the highest risk for colorectal cancer (hazard ratio [HR], 1.33; 95% confidence interval [CI], 1.19-1.49), followed by the PU-developed group (HR, 1.11; 95% CI, 1.03-1.19) and the PU-recovered group (HR, 1.08; 95% CI, 1.01-1.16) after adjusting for potential confounders (P for trend < .001). The risk for cancer in the PU-persistent group was more pronounced in males and individuals younger than 65. The association between changes in PU status did not differ according to smoking, drinking, diabetes, obesity, chronic kidney disease, and the use of RAS inhibitors.

Conclusion

PU was an important risk factor for colorectal cancer, especially for relatively early-onset colorectal cancer in males. Recovering from PU was associated with a reduced risk of colorectal cancer compared to persistent PU, suggesting that colorectal cancer risk can be altered by changes in PU status.

Room 3

[ABSTRACT]
Free Paper 3 (Neoplasm)

Chairs

Min Ro LEE Chonbuk National University, Korea

Choon Sik CHUNG Hansol Hospital, Korea

Recent update for Long-term oncological outcomes of lateral lymph node dissection after chemoradiotherapy in rectal cancer; Does it improve survival?

Kiho YOU[1], Jae Hwan OH[1], Kiho YOU[1], Dong Woon LEE[1], Sung Chan PARK[1], Dae Kyung SOHN[1], Kyung Su HAN[1], Chang Won HONG[1], Byung Chang KIM[1], Hee Jin CHANG[2], Dae Yong KIM[3], Jae Hwan OH[1]

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[3]Proton Therapy Center, National Cancer Center, Korea, Korea

Background

In cases of locally advanced rectal cancer (LARC) presenting with enlarged lateral lymph nodes (LLNs), lateral lymph node dissection (LLND) has been reported to be effective for local control. Building on previously published studies, we have included recent patient data to compare long-term oncologic outcomes in patients with pretreatment LLNs of short axis ≥ 5mm, before and after the introduction of LLND.

Methods

A retrospective study divided patients into two groups by the year 2010. Total mesorectal excision (TME)-only group (2001–2009, n = 97) and the TME+LLND group (2011–2021, n = 126) were compared. All had LLNs ≥ 5 mm on pretreatment MRI and received nCRT. Comparisons were made between both groups' clinicopathological outcomes, and the five-year results for local recurrence (LR), relapse-free survival (RFS), and overall survival (OS) were analyzed.

Results

The TME+LLND group had more capecitabine in nCRT and oxaliplatin in adjuvant therapy. At 5 years, TME+LLND showed lower LR (8.1% vs 26.0%, $p < 0.0001$) and better RFS (76.4% vs 61.6%, $p = 0.013$) than TME-only. OS was similar between groups (85.1% vs 78.0%, $p = 0.148$). Multivariate analysis indicated LLND independently contributed to better LR, RFS, and OS, with hazard ratios of 0.202, 0.385, and 0.492, respectively ($p < 0.001$, $p < 0.001$, $p = 0.039$).

Conclusion

Our study shows that LLND significantly reduces LR and improves RFS, but does not enhance OS in LARC with enlarged LLNs ≥ 5 mm on pretreatment MRI. Multivariate analysis suggests that LLND is an independent factor for LR, RFS and OS. This finding indicates that further investigation into the impact of LLND on OS is warranted.

Laparoscopic versus robotic-assisted resection in mesorectal fascia threatened rectal cancer

Jongmin LEE

Yongin Severance Hospital, Korea

Background

Robotic assistance has the potential to provide precise dissection in rectal cancer surgery, supporting high resolution, 3-dimensional imaging and articulated instruments. Although previous studies showed these features did not lead to pathological- and oncological superiority of robot over laparoscopic surgery, hypothesis testing in mesorectal fascia (MRF) threatened rectal cancer was scarce.

Methods

A retrospective cohort study was conducted, comprising all patients underwent surgical resection for rectal cancer at a tertiary referral institute from the initiation of robotic surgery in July 2007 to July 2018. The 696 Patients with MRF threatened tumor (cT4 or cT3 with <2mm distance from tumor to MRF) were included in the given period, excluding patients with open surgery (n=192), palliative resection (n=67), and patients where pCRM was not assessable (n=46).

Result

Among the 696 included patients, 424 (60.9%) underwent laparoscopic surgery, while 272 (39.1%) underwent robotic surgery. There were no significant differences in cT4 (21.5% vs. 19.5%; P=0.54), cN+ (80.5% vs. 76.0%; P=0.07), lower tumor height (28.3% vs. 30.5%; P=0.82) and rate of preoperative radiotherapy (96.8% vs. 94.2%; P=0.31) between laparoscopic- and robotic surgery group. In multivariable analysis, robotic surgery (11.0%) was not a significant risk factor for positive pCRM (OR, 1.07; 95% CI, 0.65-1.75; P=0.77), compared to laparoscopy (11.7%). N2 and Lower rectum significantly increased the risk of positive pCRM (OR, 2.22; 95% CI, 1.03-4.74; P=0.039 and OR, 2.27; 95% CI, 128-4.00; P=0.005). Also, the robotic surgery did not increase the risk of local recurrence (HR, 1.14; 95% CI, 0.70-1.87; P=0.59).

Conclusions

Among patients with MRF threatened rectal tumor, robotic-assisted surgery, as compared with laparoscopic surgery, did not significantly reduce risk of pCRM and local recurrence. These findings suggest that robotic surgery does not confer oncologic benefit in MRF threatened rectal cancer surgery.

Surgical Outcomes of Colorectal Cancer Patients with Sarcopenia After Prehabilitation: A Prospective Study

Stephanie CHENG, Hongyun XU, Dulcena YEN, Dilys HOH, Darius AW, Cheryl CHONG, Sharmini SIVARAJAH, Jia-Lin NG, Fung-Joon FOO, Winson TAN, Frederick KOH

Colorectal Surgery, Sengkang General Hospital, Singapore

Aim

Sarcopenia is characterized by the progressive loss in skeletal muscle mass and strength, often observed in the elderly. Evidence suggests sarcopenia is linked with worse survival, longer length of stay (LOS) and higher risk of complications in post-operative colorectal cancer patients. In order to combat the effects of sarcopenia, prehabilitation programmes have been shown to optimize patients for improved outcomes.

Methods

Patients underwent colorectal resection surgery between 2020 and 2023 in a tertiary institution in Singapore were enrolled prospectively. Each patient's sarcopenic status was obtained by measurement of appendicular skeletal muscle mass by bioelectrical impedance. Sarcopenic patients were then enrolled in a multidisciplinary, multimodal prehabilitation programme prior to surgery. Patient demographics and outcomes were collected. Primary outcomes were post-operative morbidity and LOS, secondary outcomes were presence of recurrence and all-cause mortality.

Results

283 patients underwent colorectal cancer resection surgery between 2020 and 2023. The median age was 67 (10.62). Of the patients who underwent surgery, 32 (11.3%) were sarcopenic and 51 (18%) were severely sarcopenic.

35 patients had morbidity (12.3%), of which only 3 had an anastomotic leak (1.1%). 2 patients died post-operatively within 30 days (0.7%). The median LOS was 6 days (SD 6.65). The analyses showed there was no significant difference in the LOS, morbidity, presence of recurrence and all-cause mortality between the sarcopenic and non-sarcopenic groups. Multivariate analysis showed sarcopenia was associated with higher risk of morbidity (RR=4.12, $p<0.05$) but was not an independent risk factor for recurrence or all-cause mortality.

Conclusion

Sarcopenic patients had no statistically significant difference in surgical and oncological outcomes following prehabilitation. Whilst sarcopenia is still an independent risk factor for post-operative morbidity, these findings suggest the prehabilitation programme is an effective way to optimize sarcopenic patients prior to colorectal cancer surgery with outstanding outcomes.

Functional Outcomes after Major Colorectal Cancer Surgery: Results of a Single-Centre Prehabilitation Programme for Sarcopenic Patients

Hongyun XU, Stephanie CHENG, Dulcena YEN, Darius AW, Cheryl CHONG, Sharmini S SIVARAJAH, Jia-Lin NG, Fung-Joon FOO, Winson J TAN, Frederick H KOH

Colorectal Surgery, Sengkang General Hospital, Singapore

Aim

Sarcopenia is common among cancer patients and is associated with worse oncological prognoses and post-operative outcomes in various malignancies. Many institutions have established prehabilitation programmes for patients before colorectal cancer surgery to improve outcomes. The aim of this study is to evaluate the functional outcomes of a prehabilitation programme in a single centre in Singapore.

Methods

Patients who underwent colorectal cancer surgery in a tertiary institution from 2020 to 2023 were enrolled. Sarcopenic and severely sarcopenic patients were enrolled in a prehabilitation programme before surgery. Patient data and functional outcomes were collected before prehabilitation and after surgery. Outcomes were analysed using R.

Results

212 patients were enrolled in the study. 126 (59.4%) had no sarcopenia (NS), 34 (16.0%) had sarcopenia (S) and 52 (24.5%) had severe sarcopenia (SS). SS group had significantly lower baseline grip strength (p=0.000). At one month post-surgery, NS group had significantly lower grip strength (p=0.001) compared to baseline, while there was no significant change in grip strength in S (p=0.293) and SS (p=0.745) groups compared to baseline. Baseline performance in the six-minute walk test (6MWT) was significantly poorer in the SS group (p=0.00), while there was no significant difference post-surgery compared to baseline in all three groups, suggesting 6MWT may not be sensitive enough to differentiate pre and post-surgery functional states. There was no significant difference between all groups (p=0.57) in EQ-5D questionnaire scores at baseline. By six months post-surgery, all three groups showed significantly improved scores, although SS patients still scored significantly lower compared to the other two groups (p=0.01).

Conclusion

Unsurprisingly, severely sarcopenic patients have poorer baseline function compared to non-sarcopenic and sarcopenic patients. With prehabilitation, sarcopenic patients can return to their baseline function post-operatively, suggesting that the programme is an effective way to maintain function in sarcopenic patients after major colorectal cancer.

Minimally Invasive Conversion to Open Surgery in Simultaneous Resection of Colorectal Cancer Primary Tumors and Liver Metastases: US Trends and Outcomes

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Surgery , Johns Hopkins University , Usa

Background

Simultaneous resection of colorectal cancer (CRC) primary tumors and colorectal liver metastasis (CRLM) is becoming more common in the United States (US), particularly with the use of minimally invasive (MIS) techniques. Little is known about risk factors for conversion to open surgery and the effect of conversion on surgical outcomes. This study aims to identify risk factors associated with an unplanned MIS conversion to open surgery and compare outcomes between MIS converted to open and planned open procedures in US patients.

Methods

Using the American College of Surgeons National Surgical Quality Improvement Program database (2013-2022), adult patients who underwent MIS (robotic or laparoscopic) or planned open surgery for simultaneous resection of CRC primary tumors and CRLM were identified. Patients were stratified by operative approach and multivariable logistic regression analysis was used to identify risk factors for MIS conversion. Outcomes were compared between planned open and MIS converted procedures using propensity score matching (PSM)

Results

A total of 1831 (79.4%) underwent open resection, 381 (16.5%) an MIS procedure without conversion, and 94 patients (4.1%) an MIS converted procedure. Unadjusted analysis demonstrated significant differences in 30-day post-operative outcomes between surgical groups in wound infection (p=0.002), pneumonia (p=0.003), bleeding (p=0.008), ileus (p=0.009), operative time (p<0.001), and length of stay (p<0.001). Age ≥65 (OR 1.82; 95% CI 1.16-2.87; p=0.010) was associated with an unplanned MIS conversion. After PSM, there were no significant differences in 30-day postoperative outcomes between open or MIS converted patient cohorts (Table).

Conclusion

Increased age was associated with increased odds of conversion to open in MIS simultaneous resection of CRC primary tumors and CRLM in the US. However, no differences existed in 30-day post-operative surgical outcomes between planned open and MIS converted to open procedures. These findings suggest that an MIS approach can be attempted without adverse outcomes.

The effect of symptom and function parameters on postoperative complications in colorectal cancer surgery

Jae Hyun PARK[1], Ji Won PARK[2], Ji Won YU[3], Jin Ah SIM[3], Min Jung KIM[2], Nan SONG[3], Ae Sun SHIN[4], Seung Bum RYOO[2], Kyu Joo PARK[5], Young Ho YUN[6], Seung YONG JEONG[2], Ji Won PARK[2]

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[6]department Of Family Medicine, Seoul National University College Of Medicine, Korea

Background

The onset of symptoms and functional limitations deteriorate a cancer patient's quality of life. In the challenging process of treating cancer patients, the most worrisome part of surgery for both the patient and surgeon is occurrence of postoperative complications. Such complications, in turn, result in a worse quality of life outcomes. Many studies investigate the risk factors of postoperative complications, but evidence regarding the effect of health related QoL parameters are scarce. Through a multivariate analysis of clinical and HR QoL parameters (the EORTC QLQ C30 and CR29 questionnaires), we aim to identify symptoms and function items that are risk factors of postoperative complications in colorectal cancer surgery.

Methods

985 patients were analyzed from the colorectal cancer HR QoL cohort of Seoul National University Hospital. These patients had radical surgery for colon or rectal cancer between 2013 and 2021, including both proximal and distal cancers. As a prospectively gathered cohort, baseline questionnaires were filled including the EORTC-QLQ-C30 and EORTC-QLQ-CR29 questionnaires. Outcome variables were postoperative complication, surgical complication, medical complication, and major complication. Clinical parameters and survey results were retrospectively analyzed with multivariate linear regression models using R.

Results

Fatigue was the strongest risk factor of major complication, with an OR of 4.01 (1.589-10.139). Other risk factors included heart disease (OR 3.91, 1.34-11.42), and rectal cancer compared to colon cancer (OR 3.07, 1.36-6.92). Regarding health-related behavior items, patients with poor spiritual health status had a significantly higher incidence of medical complications (OR 2.11, 1.27-3.51).

Conclusion

The presence of certain symptoms and functional limitations at baseline were found to be risk factors of postoperative complication in this colorectal cancer surgery cohort. Surgeons must be vigilant to identify these patients before the operation to be aware of the risks and minimize complications.

Room 4

[ABSTRACT]
Middle East

Chairs

Seo-Gue YOON
Seoul Songdo Hospital, Korea

Woo Yong LEE
Sungkyunkwan Universiy, Samsung Medical Center, Korea

My Fellowship Experience in South Korea: A Journey of Professional and Personal Growth

Hussain Abdallah AL BAHRANI

Ministry of Health Saudi Arabia, Sungkyunkwan Universiy, Samsung Medical Center, Korea
South Korea, Saudi Arabia

MEMO

Colorectal Fellowship Experience in South Korea

Mohammed Ahmed ALMALIK

Riyadh First Health Cluster, Saudi Arabia

MEMO

Room 1

[Luncheon Symposium]
Medtronic

Chair

Hee C. KIM Sungkyunkwan Universiy, Samsung Medical Center, Korea

Room 2

[Luncheon Symposium]
Genomictree

Chair

Jun Won UM Korea University Hospital, Korea

Room 1

The Ahmed Shafik Award

Chair

Richard FORTUNATO Allegheny General Hospital, USA

Francis SEOW-CHOEN
Seow-Choen Colorectal Centre, Singapore

Education

Dr Francis Seow-Choen is an international known colorectal surgeon, currently in private practice in Singapore.
He was variously Head, Dept of Colorectal Surgery, SGH; Head Surgical Oncology, National Cancer Centre as well as Adjunct Associate Professor at both NUS and NTU.

Professional Experience

He was the American Society of Colon and Rectum Surgeons' first International Travelling Fellow in 1993.
He was the ESR Hughes Lecturer for the Royal Australian College of Surgeons in 1999, the Rupert B Turnbull Memorial Lecturer for the Cleveland Clinic, Ohio, USA in 2004, the Philip Gordon lecturer for the Canadian Colorectal Society in 2005, the Dr Sivalingam orator for the International Society of Coloproctology in Nagpur in 2014, the Dr PN Joshi Orator for the Association of Colon and Rectal Surgeons of India in Delhi in 2015, the B Krishna Rau Oration for the 14th National Congress of Indian Association of Gastrointestinal Endo-Surgeons in Hyderabad in 2017 and the Harry Bacon Orator for the 30th Biennial Congress, International Society of University Colon and Rectal Surgeons in Yokohama, Japan.
He received the Excellence for Singapore Award in 2000 for his contributions to international colorectal surgery.

Current concepts in Colonic Diverticular Disease

Francis SEOW-CHOEN

Seow-Choen Colorectal Centre, Singapore

Congenital or true colonic diverticulosis are most often seen on the right colon in Asians. Acquired colonic diverticulosis are qctually herniations of mucosa and submucosa only and are therefore pseuodiverticulosis. These are the most commonly seen sort of colonic diverticulosis. In caucasion populations, these are most frequently seen on the sigmoid colon. In Asian populations, these are also most common in the left colon but right colonic diverticulosis is not rare, followed by total colonic diverticulosis. The incidence of colonic diverticulosis increases with age and have a genetic basis as well. Most people with colonic diverticulosis have no symptoms. But colonic diverticulosis may present with symptomatic but uncomplicated disease, acute colonic diverticulitis or with diverticular complications. Symptomatic colonic diverticulosis has an admission rate of about 47 per 100000 population and a surgery rate that is about a quarter of the admission rate. However, regarding the management of colonic diverticulosis, there appears to be more myths than factual evidence guiding even their current treatment.

The lack of dietary fire is often cited as a cause of colonic diverticulosis, and dietary fibre is often prescribed as treatment and for prevention of colonic diverticulosis. But no study to date had demonstrated the usefulness of fibre either in reducing diverticulosis or in the incidence of complications of patients with established diverticulosis. High fibre diet is actually associated with an increase in prevalence of diverticulosis. The modern methods of dealing with the various complications of colonic diverticulosis will be discussed in further detail.

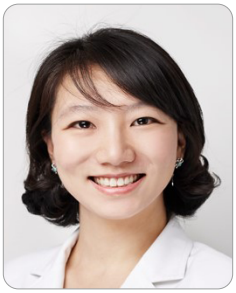
Room 1

[Laparoscopic Colorectal Surgery Study Group] TME (Live Surgery)

Chairs

Kil Yeon LEE Kyung Hee University Hospital, Korea

Chang Sik YU Ulsan University, Asan Medical Center, Korea



Ru Mi SHIN

Seoul National University Hospital, Korea

Education

2005 M.D., Seoul National University, College of medicine, Korea

2012 M.S., Seoul National University, College of medicine, Korea

2019 Ph.D., Seoul National University, College of medicine, Korea

Professional Experience

2012-2016 Assistant Professor, Department of Surgery,
Seoul National University College of Medicine, Boramae Medical Center

2017-present Associate Professor, Department of Surgery,
Seoul National University College of Medicine, Boramae Medical Center

Room 2

[Benign Anorectal Diseases] Functional Anorectal Problems: Improving the QoL

Chairs

Doo-Seok LEE Daehang Hospital, Korea

Parvez SHEIKH Saifee Hospital, Mumbai, India

Ni Na YOO
The Catholic University of Korea, Korea

Education

2023	Ph.D. at the Catholic University of Korea
2004	B.S. at the University of Michigan in Ann Arbor
2010	M.D. at the Chunbuk National University Medical School

Professional Experience

2010	Internship at Bundang CHA Medical Center
2015	Residency in General surgery at Bundang CHA Medical Center
2015-2017	Fellowship in Division of Colorectal Surgery at The Catholic University of Korea, St. Vincent's Hospital
2018-2021	Clinical Assistant Professor designate in Division of Colorectal Surgery at The Catholic University of Korea, St. Vincent's Hospital
2021-2023	Clinical Assistant Professor in Division of Colorectal Surgery at The Catholic University of Korea, St. Vincent's Hospital
2023-2024	Clinical Assistant Professor in Division of Colorectal Surgery at The Catholic University of Korea, St. Mary's Hospital
2024-present	Clinical Assistant Professor in Division of Colorectal Surgery at The Catholic University of Korea, St. Vincent's Hospital

Importance of diagnostic testing in pelvic floor functional disorders?

Ni Na YOO

The Catholic University of Korea, Korea

Pelvic floor functional disorders (PFFDs) encompass a range of conditions affecting the complex musculature and connective tissues supporting pelvic organs. These disorders, including urinary incontinence, fecal incontinence, and pelvic organ prolapse, significantly impact quality of life and pose substantial healthcare burdens. Accurate diagnosis is crucial for effective management, necessitating comprehensive diagnostic testing.

Evaluating pelvic anatomy is essential to detect any structural defects, such as pelvic organ prolapse. Imaging techniques like MRI, abdominopelvic CT scans, and various ultrasound modalities, including anorectal ultrasound, provide detailed visualization of pelvic structures. These methods enable clinicians to identify anatomical abnormalities that may contribute to PFFDs. Abdominopelvic CT scans offer excellent spatial resolution and can reveal bony pelvic floor defects, while anorectal ultrasound provides high-resolution images of the anal sphincter complex and surrounding tissues. This comprehensive anatomical assessment, combined with functional tests, offers a thorough understanding of both structural and physiological aspects of pelvic floor disorders.

Diagnostic modalities such as anorectal manometry, defecography, and pelvic floor electromyography provide invaluable insights into the functional aspects of the pelvic floor. These tests enable clinicians to differentiate between various PFFDs, assess severity, and guide targeted treatment strategies. Moreover, they aid in ruling out malignancies and other serious conditions that may present with similar symptoms.

The multifaceted nature of PFFDs often requires a combination of anatomical and functional diagnostic approaches to fully elucidate the underlying pathophysiology. This comprehensive assessment not only improves diagnostic accuracy but also facilitates personalized treatment plans, potentially reducing healthcare costs associated with ineffective interventions.

In conclusion, diagnostic testing, encompassing both anatomical and functional evaluations, plays a pivotal role in the management of PFFDs. The integration of advanced imaging techniques like abdominopelvic CT and anorectal ultrasound with functional tests enhances our understanding of these complex disorders, allows for precise identification of structural defects like pelvic organ prolapse, and paves the way for more effective, patient-centered care strategies.

Jun Seong CHUNG
Chonnam National University, Korea

Education

2003-2010 School of Life Science, Handong Global University, Pohang, Korea (Bachelor of Science in Life Science, Bachelor of Science in Food Science)

2011-2015 Dept. of Medicine, College of Medicine, Chonnam National University, Gwangju, Korea (Doctor of Medicine)

2018-2020 Dept. of Medicine, College of Medicine, Chonnam National University, Gwangju, Korea (Ph.D. Candidate in Medicine)

Professional Experience

2015-2016 Chonnam National University Hospital (Internship)

2016-2020 Chonnam National University Hospital, Dept. of Surgery (Resident)

2020-2021 Chonnam National University Hospital, Colorectal Surgery (Fellowship)

2021-2022 Chonnam National University Hospital, Colorectal Surgery (Clinical Practice Professor)

2022-Present Chonnam National University Hospital, Colorectal Surgery (Clinical Assistant Professor)

What is the role of biofeedback and pelvic floor rehabilitation?

Jun Seong CHUNG

Chonnam National University, Korea

Biofeedback is a technique that monitors real-time physiological signals and converts them into visual or auditory cues, allowing individuals to recognize and control their physiological processes. This can include various biological signals such as heart rate, muscle tension, brain waves, and body temperature.

The type of learning on which biofeedback training is based is motor skills learning: the patient attempts to perform some action and uses feedback from the success or failure of his/her attempt to learn how to refine their performance. In the case of physiological responses such as sphincter contractions, however, feedback on the success or failure of attempts to control the PFMs may be difficult to perceive, especially if the muscle is initially quite weak. Consequently, biofeedback training involves detecting and transforming small changes in the muscle response to visual or auditory signals, which the patient can use to refine his/her motor skills. Biofeedback training sessions are usually supplemented by home practice (Kegel exercises), the purpose of which is to increase the strength or ability to relax PFMs and allow for weaning the patient from their dependence on the biofeedback instrumentation.

The pelvic floor contains a group of muscles –pelvic floor muscles(PFMs) – that extend from the symphysis pubis (anterior) to the back (posterior) of the bony pelvis, forming a hammock that supports the pelvic organs. The PFMs are composed of the levator ani group and includes the pubococcygeus, puborectalis, and ileococcygeus muscles. Weakness in PFMs can lead to problems with both bladder and rectal support because fecal and urinary continence are difficult to maintain without adequate strength and support. Pelvic floor dysfunction is a general term that describes a wide variety of functional clinical problems, usually associated with abnormalities in the pelvic floor compartments. The anterior compartment has been implicated in sexual and urinary function, with urinary incontinence, pelvic organ prolapse, and sexual dysfunction the most common related symptoms. The posterior compartment is related to colorectal function, and the most common symptom seen in dysfunction of this compartment is fecal incontinence.

Methods of biofeedback include Anorectal manometry guided biofeedback therapy, surface EMG (electromyography) guided biofeedback therapy, coordination training using rectal balloons, and home training devices.

Symptoms and conditions to which biofeedback treatment is applicable include fecal incontinence, constipation, pelvic floor dyssynergia, and anorectal pain (levator ani syndrome, proctalgia fugax).

In this presentation, I will take a closer look at the effectiveness and role of biofeedback therapy in the symptoms and conditions described above.

Nasser AL-SANEA

Princess Nourah bint Abdulrahman University, Saudi Arabia

Education

Board in General surgery

Fellowship in Colorectal Surgery from University of Minnesota

Professional Experience

Honorary fellow of the American Society of Colon & Rectal Surgeons

Professor of Colon & Rectal Surgery at Alfaisal University

Consultant Colon & Rectal Surgeon at King Faisal Specialist Hospital & Research Center

President of Saudi Society of Colon & Rectal Surgery (2009-2018)

Chairman of the Saudi Board of Colon & Rectal Surgery (2008-2016)

Editor-in-Chief: Annals of Saudi Medicine & World Journal of Colorectal Surgery

Liliana BORDEIANOU
Harvard Medical School, USA

Professional Experience

Professor of Surgery, Harvard Medical School
Co-Director, MGH Pelvic Floor Disorders Center
Co-Chair, Mass General Brigham Colorectal Surgery Collaborative
Liliana Bordeianou, MD, MPH, is a board-certified colorectal surgeon and a board certified general surgeon. She is a Professor of Surgery at Harvard Medical School. At the Massachusetts General Hospital, she directs MGH Colorectal Surgery and chairs the Pelvic Floor Disorders Center . At the Mass General Brigham, she serves as the Co-Chair of the MGB Colorectal Surgery Collaborative.
Dr. Bordeianou specializes in treating a broad range of colorectal conditions that include Rectal Cancer, Colon Cancer, Crohn's disease, Ulcerative Colitis, Diverticulitis, Rectal Prolapse, and Pelvic Floor Disorders. She is skilled in a wide range of techniques that allow for a choice for the best minimally invasive approaches needed to address specific surgical challenges, including: robotic and laparoscopic surgery, transanal endoscopic microsurgery (TEM) and transanal minimally invasive surgery (TAMIS). She is also is an expert in performing open surgery for complex redo surgical procedures that require time, patience, precision and experience. She has a special interest in sphincter preservation techniques for low lying rectal cancer and for patients with Inflammatory Bowel Disease. She is an international expert in the field of sphincter preservation, ileoanal J pouch reconstruction, rectal prolapse and pelvic floor reconstruction.

Ali Ahmed SHAFIK
Cairo University, Egypt

Biography

Dr. Shafiq has obtained numerous certifications that qualify him to practice his profession efficiently. He also possesses extensive experience in performing surgical procedures related to the colon, rectum, anus, and hemorrhoids, in addition to diagnostic procedures such as endoscopies and precise examinations. Dr. Shafiq also holds several official positions in medical institutions and organizations, reflecting his leadership in his field. Furthermore, he has published several scientific publications that contribute to a better understanding of gastrointestinal diseases and the development of effective treatment methods.

Experience and education

Dr. Ali Ahmed Shafik graduated from the Faculty of Medicine at Cairo University in 1991 and received his doctorate in 1998. He specializes in gastrointestinal surgery, specifically colon, rectum, and anus surgeries. Dr. Shafik is a leading proctologist, hemorrhoid surgeon, and colorectal surgeon who is highly respected in his field. He has been the head of the colorectal surgery unit at Qasr Al-Ainy Hospitals since 2019. He holds several official positions in Egyptian and international scientific associations and has a significant number of scientific publications in the fields of colon and rectal surgery. He is dedicated to advancing scientific research in Egypt through the Ahmed Shafik Foundation for Science. Dr. Shafik's contributions to the medical field have been widely recognized, and he has received numerous awards and accolades from prestigious universities, such as the University of Cambridge in the UK. He has also signed several cooperation protocols between Ahmed Shafik Hospital and two Chinese hospitals, making him a highly regarded gi doctor in the international medical community.

Room 3

[Emerging Technology] Emerging Technologies and the Future

Chairs

Gyu Seog CHO Kyungpook National University, Korea

Kristen RUMER Mayo Clinic, Minnesota, USA

Hongki YOO
KAIST, Korea

Education

Hongki Yoo is an associate professor in the Department of Mechanical Engineering at the Korea Advanced Institute of Science and Technology (KAIST), Korea. Professor Yoo earned his B.S., M.S., and Ph.D. degrees in Mechanical Engineering from KAIST.

Professional Experience

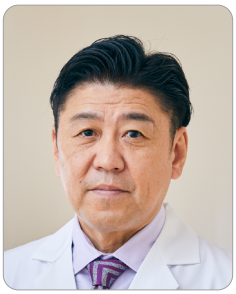
He has worked as a postdoctoral research fellow and an instructor at the Wellman Center for Photomedicine at Harvard Medical School and Massachusetts General Hospital. From 2012 to 2019, Prof. Yoo led the Biomedical Optics and Photomedicine Lab in the Department of Biomedical Engineering at Hanyang University. He joined KAIST in 2019 to establish and lead the Biomedical Optics and Optical Metrology (BOOM) Lab. His research topics include multimodal optical imaging, endoscopic imaging, optical coherence tomography, 3D metrology, diagnostics and therapeutics of cardiovascular disease, and machine learning in optical imaging. For more information on Professor Yoo's research projects, please visit his lab's website at https://boom.kaist.ac.kr.

In vivo multimodal endomicroscopy: A boost for real-time evaluation of lesions?

Hongki YOO

KAIST, Korea

Optical imaging technologies enable us to obtain structural and biochemical information, allowing for high-resolution and precise observations of biological samples that were previously unobservable. Especially, with recent advancements in optical technologies, such as, lasers and optical fibers, novel optical imaging techniques have been developed and have found widespread use in the biological and medical fields. For instance, optical coherence tomography (OCT), an interferometric method for acquiring three-dimensional cross-sections of biological tissue, has successfully been translated into clinical diagnostics. This technology offers microscopic views of biological structures, particularly in fields such as ophthalmology, gastroenterology, and cardiology. Additionally, fluorescence lifetime imaging (FLIm), which measures nanosecond-scale decay time of fluorescence, has emerged as a label-free diagnostic modality leveraging endogenous autofluorescence within biological samples. The synergistic integration of OCT and FLIm offers a real-time, comprehensive perspective on pathological lesions, thereby positioning their combined application as a highly promising method in medical imaging. Furthermore, the adoption of machine learning approaches for processing highly complex optical signals and images is effectively assisting precise diagnosis, guiding optimized treatment. In this talk, I will discuss the technological evolution and combination of OCT and FLIm, their applications in diagnostic devices for cardiovascular disease, and advancements in image analysis and image quality improvement through machine learning.



Masaaki ITO
National Cancer Centre Hospital East, Japan

Education

1993	M.D. School of Medicine, Chiba University, Chiba, Japan
2001	Ph.D. Graduate School of Medicine, Chiba University, Chiba, Japan

Professional Experience

At "National Cancer Center Hospital East, Kashiwa, Chiba, Japan"

2000-2009	Attending surgeon, Department of Colorectal & Pelvic Surgery
2005-2009	Additional post, Research of Innovative Oncology
2009-2010	Chief, Department of Gastroenterology
2010-2012	Chief of Lower Gastrointestinal Surgery, Department of Gastrointestinal Oncology
2012-2015	Chief Outpatient Doctor, Department of Colorectal Surgery Laboratory Head, Division of Science and Technology for Endoscopy and Surgery
2015-present	Head, Department of Colorectal Surgery /Head, Division of Surgical Technology
2017-present	Head, Medical Device Project Management Office at "Next Medical Device Innovation Center"
2022-present	Deputy Director

Dae Kyung SOHN
National Cancer Center, Korea

Education

1991-1997 (M.D.) Seoul National University College of Medicine, Korea
2003-2005 (Master) Chungbuk National University College of Medicine, Korea
2006-2011 (Ph.D.) Chungbuk National University College of Medicine, Korea

Professional Experience

1998-2002 Residency, Department of Surgery, Seoul National University Hospital
2002-2003 Clinical fellow, National Cancer Center2019-present Director, Healthcare Platform Center, National Cancer Center
2008 Research fellow, Department of Surgery, Massachusetts General Hospital, MA
2003-present Staff Surgeon, Center for Colorectal Cancer, National Cancer Center
2018-present Professor, Department of Cancer Control and Population Health, NCC Graduate School of Cancer Science and Policy
2019-present Director, Healthcare Platform Center, National Cancer Center

Robotic assisted colonoscopy and beyond: Insights into modern lower GI endoscopy

Dae Kyung SOHN

National Cancer Center, Korea

Conventional colonoscopy is a highly effective tool for screening and diagnosing colorectal diseases, but it faces challenges such as operator dependency, patient discomfort, and the risk of unexpected complications. The introduction of robotic-assisted technologies in colonoscopy aims to address these issues by enhancing precision, stability, and maneuverability, representing a significant leap forward in the field.

Robotic colonoscopy incorporates several key technological innovations that improve both diagnostic and therapeutic outcomes. One of the primary advancements is the automated manipulation and steering system, which allows for precise control of the endoscope. This system, exemplified by the Endotics system, uses remotely controlled robotic modules to navigate the colon more effectively, reducing patient discomfort and ensuring comprehensive visualization. Another important development is the hybrid robotic endoscopy system, which combines traditional endoscopy with robotic technology. For example, the Flex Robotic system supports a flexible endoscope with a robotic arm, facilitating stable positioning even within complex colon structures. This approach is particularly beneficial for the early detection of colorectal cancer and the precise removal of lesions.

The integration of artificial intelligence (AI) into robotic colonoscopy further enhances its capabilities. AI systems, such as GI Genius, provide real-time imaging analysis and assist in the detection of abnormalities like polyps and tumors that might be missed by the human eye. This technology is crucial for improving the diagnostic accuracy of colonoscopy. Robotic colonoscopy also extends its applications to therapeutic procedures. Robotic assistance enables precise surgical interventions, such as endoscopic submucosal dissection (ESD) or polypectomy, making these procedures safer and more effective. These technologies help reduce hand tremors, allowing for meticulous lesion removal and minimizing patient recovery time.

Moreover, patient-specific robotic endoscopy systems are being developed to tailor procedures to individual anatomical variations. By utilizing pre-procedural 3D modeling, these systems optimize the navigation of the robotic endoscope, particularly benefiting patients with complex colon structures.

In conclusion, robotic-assisted colonoscopy represents a promising advancement in the field. These technologies have the potential to significantly improve colorectal cancer screening and management by enhancing procedural precision, patient comfort, and diagnostic accuracy. Continued collaboration between clinicians, engineers, and industry will be vital to overcoming current challenges and fully realizing the benefits of robotic-assisted colonoscopy.

Jun Seok PARK

Kyungpook National University, Korea

Education & Professional Experience

1995-2001 Chung-Ang University, School of Medicine
2001-2002 Rotation Intership ,Chung-Ang University Hospital
2002-2006 General Surgery Residency, Chung-Ang University Hospital
2006-2007 Clinical Fellow, Seoul National University Bundang Hospital
2007-2009 Clinical Fellow, Chung-Ang University Hospital
2009-2010 Clinical Assistant Professor, Kyungpook National University Hospital
2010-2013 Assistant Professor, School of medicine, Kyungpook National University
2015-2017 Visiting professor, Center for System Biology, Harvard Medical School
2014-Present Professor, School of medicine, Kyungpook National University

Initial Experiences of Design and development of medical cobot to assist surgeon

Jun Seok PARK

Kyungpook National University, Korea

In recent years, robotic assistance has become increasingly used and applied in minimally invasive surgeries. A new cooperative surgical robot system that includes a joystick-guided robotic scope holder was developed in this study, and its feasibility for use in minimally invasive abdominal surgery was evaluated in a preclinical setting.

The cooperative surgical robot consists of a six-degree-of-freedom collaborative robot arm and a one-degree-of-freedom bidirectional telescopic end-effector specializing in surgical assistance. The robot holds the endoscopic camera and performs remote center motion based on the port into which the trocar is inserted. Surgeons can operate the robot with joysticks or hand-guided control. Cadaveric sessions were conducted in a male human cadaver to evaluate the system's potential to provide adequate surgical access and the reach required to complete a range of general abdominal surgeries.

The results indicated that minimally invasive abdominal surgeries (low anterior resection, appendectomy, and cholecystectomy) were technically feasible with the new cooperative surgical robot, with docking times of 43, 26, and 32 s, respectively. The operative times were 15, 55, and 35 min for appendectomy, total mesorectal excision, and cholecystectomy, respectively. A National Aeronautics and Space Administration Task Load Index cognitive workload assessment by six surgeons who participated in the cadaveric study resulted in an acceptable global score of 42.2.

This preclinical study demonstrated that the new cooperative robotic surgery is usable in minimally invasive abdominal surgeries. Further simulations are necessary to confirm this promising product.

Chul-Kee PARK
Seoul National University Hospital, Korea

Education

1990-1996	**University** Seoul National University, College of Medicine
1996-1997	**Internship** Seoul National University Hospital
1997-2001	**Residency** Department of Neurosurgery, Seoul National University Hospital
2004-2005	**Fellowship** Department of Neurosurgery, Seoul National University Hospital (Brain tumor and related research)
2001	**Specialty Boards** Certified in Neurosurgery (Korean Board of Neurosurgery)
2001	**M. Sc**. Seoul National University Graduate College of Medicine, (Medicine, Neurosurgery)
2009	**Ph. D.** Seoul National University Graduate College of Medicine, (Medicine, Neurosurgery)

Professional Experience

2006-2011	Assistant Professor, Department of Neurosurgery, Seoul National University Hospital
2011-2016	Associate Professor, Department of Neurosurgery, Seoul National University College of Medicine
2013-2021	Adjunctive Assistant Professor, Department of Neurosurgery, Johns Hopkins University
2016-present	Professor, Department of Neurosurgery, Seoul National University College of Medicine

Real world surgery with virtual reality system. Will it enhance the quality of surgical procedures?

Chul-Kee PARK

Seoul National University Hospital, Korea

The medical metaverse can be defined as a virtual spatiotemporal framework wherein higher-dimensional medical information is generated, exchanged, and utilized through communication among medical personnel or patients. This occurs through the integration of cutting-edge technologies such as augmented reality (AR), virtual reality (VR), artificial intelligence (AI), big data, cloud computing, and others. We can envision a future neurosurgical operating room that utilizes such medical metaverse concept such as shared extended reality (AR/VR) of surgical field, AI-powered intraoperative neurophysiological monitoring, and real-time intraoperative tissue diagnosis. The future neurosurgical operation room will evolve into a true medical metaverse where participants of surgery can communicate in overlapping virtual layers of surgery, monitoring, and diagnosis.

Room 4

[Clinical Practice Guidelines Committee]
Global Updates of Clinical Practice Guideline

Chairs

Jung-myun KWAK Korea University, Korea
Keiji KODA Teikyo University Chiba Medical Center, Japan

Myung Jo KIM
Chungbuk National University, Korea

Education

2008 Medical student: Jeju National University College of Medicine
2019 Master Degree (Surgery): Soonchunhyang University, School of Medicine
2011-2012 Internship: Jeju National University Hostpital
2012-2016 Resident (Surgery): Soonchunhyang University Seoul hospital

Professional Experience

2016-2018 Fellowship (colorectal division): Seoul National University Bundang Hospital
2018-2023 Clinical Assistant Professor: Chungbuk National University Hospital
2024-present Clinical Associate Professor: Chungbuk National University Hospital

Colorectal cancer screening: A global overview of existing programmes

Myung Jo KIM

Chungbuk National University, Korea

Colorectal cancer (CRC) is the third most common tumour in men and the second in women, accounting for 10% of all tumour types worldwide, With more than 600 000 deaths. Screening for colorectal cancer is recommended for asymptomatic adults starting at age 50 in the United States, although earlier screening may be recommended for individuals with certain risk factors.

A diagnosis of colorectal cancer is traditionally considered a malignancy of older individuals. For average-risk patients, the development of colorectal cancer is often attributed to inadequate screening. In 2020, it was estimated that approximately only 71·6% of all individuals between age 50 and 75 years have been appropriately screened. However, optimal follow-up care for this growing population of posttreatment cancer survivors is unclear.

There are several screening modalities available, including stool-based tests, flexible sigmoidoscopy, and colonoscopy. Stool-based tests, such as fecal immunochemical tests (FIT) and stool DNA tests, are non-invasive and have high sensitivity and specificity for detecting colorectal cancer and precancerous polyps. Colonoscopy is considered the gold standard for colorectal cancer screening, as it allows for the detection and removal of precancerous polyps and provides a visual examination of the colon.

Many organizations have issued guidelines on screening for colorectal cancer. Healthcare providers should discuss the available screening options with their patients and follow the recommended surveillance guidelines to ensure early detection and effective treatment.

Vitaliy POYLIN
Northwestern Medicine, USA

Education

1994-1997	University of Massachusetts Boston Honors College
	Bachelor of Science - BS, Biology, General
1998-2002	University of Wisconsin-Madison, Doctor of Medicine - MD, Medicine
2020-2022	Northwestern University - Kellogg School of Management
	Executive MBA, Business Administration and Management, General

Professional Experience

2020-2022	Northwestern University-Kellogg School of Management, MBA
2019-Present	Northwestern University-The Feinberg School of Medicine
	Associate Professor Of Surgery
2021-Present	Skali Inc. Co-Founder
2022-Present	Northwestern Medicine, Section Director, Colon and Rectal Surgery
2022-Present	Pack the Plane to Ukraine, Co-Founder and Board Member

Co-founder and board member of Pack the Plane to Ukraine(packtheplanetoukraine.org), a 501c3 charity that collects, donates and distributes both humanitarian and medical/surgical supplies to Ukraine. The charity also funded a medical mission in June 2022, which resulted in 22operations and 80 medical consults in western Ukraine and Kyiv.

Mark HARRISON
Mount Vernon Hospital, UK

Education

1980-1985	Royal Free Hospital School of Medicine, University of London

Professional Experience

1985	MBBS, University of London
1989	Member, Royal College of Physicians
2009	Fellow, Royal College of Physicians
1992	Fellow (Clinical Oncology), Royal College of Radiologists
1998	PhD (Cell Biology), University College London

Emre BALIK
Koc University School of Medicine, Türkiye

Education & Professional Experience

Dr. Balık is a Professor of General Surgery at Koç University Hospital. He is fellowship trained in minimally invasive surgery at the Colorectal Surgery department of the School of Medicine in the Columbia University from 2004 to 2005. His primary specialty focus is gastro-intestinal (GI) system surgery encompassing colorectal surgery and upper GI surgery. He is specialized in minimal invasive surgical techniques (laparoscopy and robotic surgery), endoscopic procedures, anal manometry and proctology.

He attended Istanbul University Istanbul School of Medicine completing his Medical Degree. He completed his general surgery residency in the same institution and after residency he began to work as an attended surgeon digestive surgery department. He obtained his associate professor degree in 2010 and professor degree in 2016. He passed the European Coloproctology board exam 2013. He is currently the head of the general surgery department in Koç University School of Medicine.

Iltae SON
Hallym University Medical Center, Korea

Education

1999-2006 M.D., The Chungbuk National University, College of Medicine, Cheongju, Korea
2014-2016 M.S (Dept. of General Surgery), College of Medicine, Seoul National University, Seoul, Korea
2017-2019 Dept. of General Surgery, College of Medicine, Seoul National University, Seoul, Korea

Professional Experience

2006-2007 Intern Trainee, Aju University Hostpital, Suwon, Korea
2007-2011 Resident Trainee, Department of Surgery, Seoul National University Hospital, Seoul, Korea
2014-2016 Fellowship, Colorectal divison, Department of Surgery, Seoul National University Bundang Hospital, Seongnam, Korea
2016-2017 Fellowship, Colorectal divison, Department of Surgery, Uijeongbu St. Mary's Hospital, The Catholic University of Korea, Uijeongbu, Korea
2017-2018 Clinical assistant professor, Colorectal divison, Department of Surgery, Uijeongbu St. Mary's Hospital, The Catholic University of Korea, Uijeongbu, Korea
2018-2019 Clinical assistant professor, Dept. of General Surgery, College of Medicine, Hallym University, Hangang Sacred Heart Hospital, Seoul, Korea
2019-present Assistance Professor, Dept. of General Surgery, College of Medicine, Hallym University, Hallym University Sacred Heart Hospital

Management for fecal incontinence

Iltae SON

Hallym University Medical Center, Korea

Management of fecal incontinence (FI) was updated with review of the guideline of the ASCRS 2023, the ESCP 2022, and the KSCP 2021. It summarized that FI management had low or very low quality of evidence in recommendation, assessment, development, and evaluation with long-term cure rates of less than 50 %. FI is still unmet medical need disease with increasing rising life expectancy, and has been shifting 'recurrent' disease to 'refractory' disease in spite of advanced treatment modality. This study investigated why current evidence for management of FI remained low status through translational scope and molecular basis. Key wards for translational scope and molecular basis in FI management are as followed; cytoskeletal structure of sarcomeres, tonic or phasic force mechanics, contractile molecules such as Rho/ROCK with downstream molecules, and neuronadymics. Basal tone of internal anal sphincter (IAS) is fundamental mechanics to determine an involuntary leakage by a loss of resting pressure to maintain normal continence. Tonic contraction status of IAS is sustained by stress fibers of smooth muscle cells (SMCs) as an intrinsic property based on molecular complexity, which involve diverse pathways. Among their pathways, RhoA/ROCK with downstream molecules play as essential regulators of the cytoskeletal tension in SMCs of IAS by modulating the formation and maintenance of stress fibres in the cell. As a major molecular motors in stress fibres, actomyosin cytoskeleton, which consisted of myosin II along with F-actin, can generate actual force of basal tone as mechanical properties. The development of advanced FI treatment modality via translational scope and molecular basis required deep level of evidence. However, precise mechanism underlying neuro-modulation such as sacral nerve stimulation aid in control FI remained poorly understood. The effectiveness of commonly used clinical management for FI is not always adequate due to the complexity of its etiology and mechanism. It might be also due to very weak molecular link of mechanisms for sphincter pressure, with needs for pathway interrelation analysis of key molecules derived from top scoring network clusters. Therefore, it should be warranted to consider deeper level of evidence based on molecular basis rather than high level of evidence such as randomized control trial for a clue of groundbreaking treatment modality.

Grand 1+2+3

[ABSTRACT]
Video Presentation 1

Chairs

Seung-Bum RYOO Seoul National University Hospital, Korea
Chang Hyun KIM Chonnam National University, Korea

Laparoscopic lateral lymph node dissection for recurrent patients after rectal cancer resection

Shigeki YAMAGUCH, Fumi MAEDA, Kimitaka TANI, Kurodo KOSHINO, Ryo FUTATSUKI, Yuka KANEKO, Yoshiko BAMBA, Shinpei OGAWA

Division Of Colorectal Surgery, Department Of Surgery, Tokyo Women's Medical University, Japan

Background

Lateral lymph node dissection (LLND) is still technically demanding. However solitary recurrence of this part is still possible to cure. This presentation is demonstrating our laparoscopic technique and short and middle term results.

Methods

After curative resection of rectal cancer, CT scan is checked every 6 months. If the lateral lymph node grows larger, MRI and PET-CT are performed to confirm recurrence. Actual laparoscopic procedure is started from exposure of the external iliac artery. Lateral and medial border of the obturator fossa is exposed. The obturator nerve is preserved and the obturator vessels are sacrificed. Then exposing the sacral plexus and levator muscle, the deepest part of the fossa is removed(#283 of the JSCCR). Next the internal iliac artery and vein are exposed and tissues are removed(#263 of the JSCCR). If the metastatic lymph node invading the internal iliac vessel, combined resection is mandatory.

Results

Since January 2022 to February 2024, LLND for recurrent rectal cancer was performed for 5 patients. Three patients were male. Mean age and BMI were 51 and 26.5. Mean operating time and blood loss were 245 minutes (176–302) and 7g (1-15). All patients recurred unilateral side and combined resection of the internal iliac vessel was needed for one patient. There is no postoperative complication and median postoperative hospital stay was 7 days. The average of maximum drainage volume was 132 ml/day and mean volume before drain removal was 78ml/day. Mean number of retrieved lymph node was 10.6. Number of metastasis was 1 or 2 and mean size was 1.7cm. No recurrence was observed in 398 day of mean follow-up.

Conclusions

Laparoscopic LLND for recurrent patient is good indication. Careful follow-up after rectal cancer resection is necessary to accomplish good results.

Puborectoplasty in Fecal Incontinence

Ismail Shafik

Cairo university, Egypt

The treatment of neurogenic and traumatic fecal incontinence (FI) as may result from severe anal sphincteric destruction is problematic. A novel technique for the treatment of these cases is presented. The study comprised 44 patients, which included 28 with neurogenic and 16 with traumatic FI. Patients were divided into two equal groups. Two fascia lata slings (FLS) were applied in Group 1, while one sling was used in Group 2. Investigations comprised manometric and electromyographic studies. The procedure consisted of performing a curvilinear incision behind the anal orifice, and the supralevator region was entered. The middle of an FLS was sutured to the back of the upper part of anal canal. Each of the two limbs of the sling was passed forward through an incision on the pubic ramus and was sutured to the periosteum of the pubic ramus. This was preformed in Groups 1 and 2. A second FLS was added in Group 1. Its center was sutured to the front of the mid anal canal and its two limbs to the coccyx. Satisfactory results (continence scores 1 and 2) were obtained in 63.6% of Group 1 and 36.4% of Group 2. Significant postoperative anal pressure increase occurred in scores 1 to 3 in Group 1 and in scores 1 to 2 in Group 2. Anal pressure increase was more prominent in Group 1 than in Group 2. The continent effect of the operation appears to be due to the increase of anal pressure, anal canal elongation, and recto-anal angulation. The operation is indicated in FI of the idiopathic or traumatic type with excessive sphincteric loss. It is simple and easy and performed under no cover of colostomy.

keyword

Fecal , Incontinence , Fascia lata

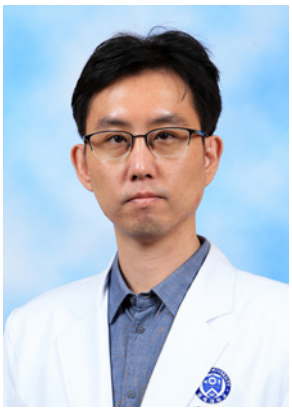
2024 대장일 골드리본 캠페인 정책 심포지엄

필수의료 최전선
대장항문외과 방어전략

Session 1

대장항문외과: 대학병원 응급수술의 40% 책임진다

김형록 (대한대장항문학회 회장)
김길원 (한국의학바이오기자협회 회장)



CURRICULUM VITAE

양승윤
연세의대 신촌세브란스병원 대장항문외과

학력

2008.03-2012.02	경북대학교 의학전문대학원
2016.03-2023.03	연세대학교 의학박사

경력

2012.03-2013.02	연세대학교 의과대학 세브란스병원 인턴
2013.03-2017.02	연세대학교 의과대학 세브란스병원 외과 전공의 수련
2017.03-2018.02	연세대학교 의과대학 외과학교실 임상강사
2018.03-2019.02	연세대학교 의과대학 외과학교실 임상연구조교수
2019.03-현재	연세대학교 의과대학 외과학교실 임상조교수

Membership

The Korean Surgical Society
Korean Society of Coloproctology
Korean Society of Surgical Oncology
The Korean Society of Endoscopic & Laparoscopic Surgeons
Society of Surgical Oncology

Session 1

대학병원 응급수술 현황

양승윤 (세브란스병원)

필수의료란 국민의 생명에 직결된 분야로서 긴급하게 제공되지 않으면 생명을 보존할 수 없거나 심신에 중대한 위해가 발생할 가능성이 있는 의료서비스를 의미한다. 필수의료에서 대장항문외과가 차지하고 있는 위치를 객관적으로 알아보기 위해 본 조사를 시작하였다.

총 18개 병원에서 2023년에 전신 마취 하에 응급수술을 시행 받은 환자들을 대상으로 후향적 의무기록조사를 시행하였다.

전체 33,644개의 응급수술 중 외과가 35%로 가장 많은 응급수술을 시행하였고 이는 두번째로 많은 정형외과 (17%)와 비교하여 2배 이상 높았다. 급성복증은 복강내 장기의 염증, 천공, 폐색, 경색, 그리고 파열에 의한 복통을 수반하는 생명을 위협할 수 있는 외과적 응급 상황으로 간주된다. 따라서 외과 응급수술이 긴급하게 제공되어야 하는 급성복증 수술한 환자들만을 대상으로 분석하였을 때 대장항문외과 질환이 75%를 차지하였다. 또한 대장항문외과 응급수술 환자의 40% 이상이 ASA score 3 이상으로 중증도가 높은 환자들이 대다수였으며, 수술 시작 시간의 80% 이상이 자정이 넘은 새벽에 수술이 진행된 만큼 대장항문외과 응급수술은 지체없이 긴급하게 제공되어야 하는 것을 알 수 있었다.

본 조사를 통해 필수의료의 대표 분야인 외과에서 대장항문외과가 가장 많은 응급수술을 담당하고 있으며 대장항문외과 응급수술의 노동 강도와 중증도가 높음을 알 수 있었다.

CURRICULUM VITAE

조성우

차의과대학교 강남차병원 소화기센터

주요경력

순천향대학교 서울병원 외과과장

주요학력

순천향대학교 의과대학 졸업, 의학대학원 박사

프랑스 스트라스부르 국립대학교병원 IRCAD/IHU연구소 연수

수 련

순천향대학교 외과학교실 전공의

순천향대학교병원 대장항문외과 전임의

응용연구

의료기기개발, 의료영상 / [기초연구] 소화기종양, 혈관신생, 항산화

국책과제

2018	한국연구재단기초; 근감소성비만과 급성게실염
2019-20	정보통신진흥원; 지능형수술가이드시스템개발
2020-2	정보통신기획평가원; 동영상수술교육시스템개발
2023-	범부처의료기기개발과제

학회활동

대한외과학회 보험위원, 대한대장항문학회 보험위원장,

대한의료기술혁신학회 총무이사(전), 연구위원장

[기타활동]

보건복지부 분야별 전문평가위원, NECA평가위원,

건강보험심사평가원 평가위원, 대한의사협회 보상심의위원

Session 1

임금상승률을 반영한 충수절제술 원가 분석 및 수가 제안

조성우 (강남차병원)

2000명 의대증원 사태는 그동안 아무도 언급하려 하지 않던 대한민국 의료의 가장 어두운 부분을 적나라하게 드러내고 말았다. 그동안 대한민국 유럽이나 일본 등과 비교하여 너무나 터무니없게 낮게 책정되어 있는 의료 지불제도로 인해, 그간 의료계는 의료 인력을 터무니없이 무리하게 운용하는 방식 등의 왜곡된 해결책으로 간신히 유지되어 왔던 것이다.

우리 대한대장항문학회는 일선에서 응급 수술과 고령의 위중한 환자들의 치료의 많은 부분을 담당하고 있는 회원 한 분 한 분과 함께 이번 사태 초기에서부터 대외적으로 많은 우려를 표하고 여러 차례 공식적 의견을 표방하는 한 편, 내부적으로는 '필수의료의 중심, 대장항문외과 지속성을 위한 TFT'를 결성하여, '대장항문의사의 응급 수술 담당 현황', '대장항문 의사의 근무 현황 파악', '지역 의료 살리기', '적정 보상', '고난도 수술 보상 현실화', 그리고 '미디어 홍보 강화' 등과 같은 여러 현안들에 대한 치열한 논의를 계속 진행해 왔다.

정책3팀은 '의료의 적정 보상'을 맡았다. 간단히 요약하면 의료 기관에서 환자/질병에 치료하는데 소요된 비용을 각종 지불 제도 (행위별수가제, 포괄수가제, 신포괄수가제) 하에서 적법하게 지급받고 있는지를 검증하고, 문제점을 찾아내며, 이를 바로잡기 위해 노력하지는 것이다. 그 첫 단추로써 정책3팀은 외과 대표 질환인 '급성충수염'과 이에 대한 수술적 치료 방법인 '(복강경) 충수절제술을 분석해 보고자 한다. 외과전문의, 그리고 대장항문외과 전문의에 의해 시행되는 충수절제술은 비교적 유병율이 높은 질환으로, 개원가의 병의원에서부터 외과전문병원, 종합병원, 대학병원 그리고 상급종합병원에 이르기까지 다양한 병종에서 널리 시행되고 있고, 전신마취 하에서 정규수술과 응급수술 두 형태로 수행된다. 수술을 시행할 때, 질환의 진행 정도에 따라 중증도에서 천차만별인데, 외과 의사는 수술 후 수일 내 회복되는 경과를 보이는 단순충수염 상태에서부터 천공(터짐)으로 인한 심한 염증과 복강/골반 내 농양 형성 상태, 그리고 복강 내로 대변이 퍼져 있는 복막염과 패혈증 등 생명이 위험할 수 있는 중한 상태까지 다양한 진행 정도를 접하고 치료해야 한다. 수술 후 수가 보상체계 역시 다양하다. 진단명에 따라 정해져 있는 금액을 보상받는 포괄수가제와 신포괄수가제 시스템이 있는가 하면, 치료에 소모한 자원을 직접 청구하고 보상받는 행위별수가제 시스템도 있다.

이번 골드리본캠페인을 통해서, 우리는 중등도로 진행된 급성충수염에 대한 복강경 충수절제술을 종합병원과 외과 전문병원급에서 시행한 실제 증례를 분석하여, 2024년 현재 복강경 충수절제술에 소모되는 인건비 등의 의료 자원을 다시 계산하여, 현재의 급여 보상 시스템 하에서 보상은 과연 적절하게 이루어지고 있는지를 검증하고, 이를 바탕으로 현재 임상의 여러가지 의료진의 고용 형태와 일선 병원의 병동 시스템 별로 시뮬레이션 하였으며, 더 나아가 응급/야간 수술일 때의 지급 소요되는 인건비 증가분을 온전하게 보전할 수 있는지 역시 살펴보았다.

1. 병원 및 환자군

1) A병원 – ⓐ병동 – ①수술실 – ㉯환자
2) A병원 – ⓐ병동 – ①수술실 – ㉰환자
3) B병원 – ⓑ병동 – ②수술실 – ㉮환자

1) 병원

	A병원	B병원
종별	종합병원	병원
위치	서울도심	경기수도권
중환자실	없음	없음
응급실	있음	없음

2) 병동

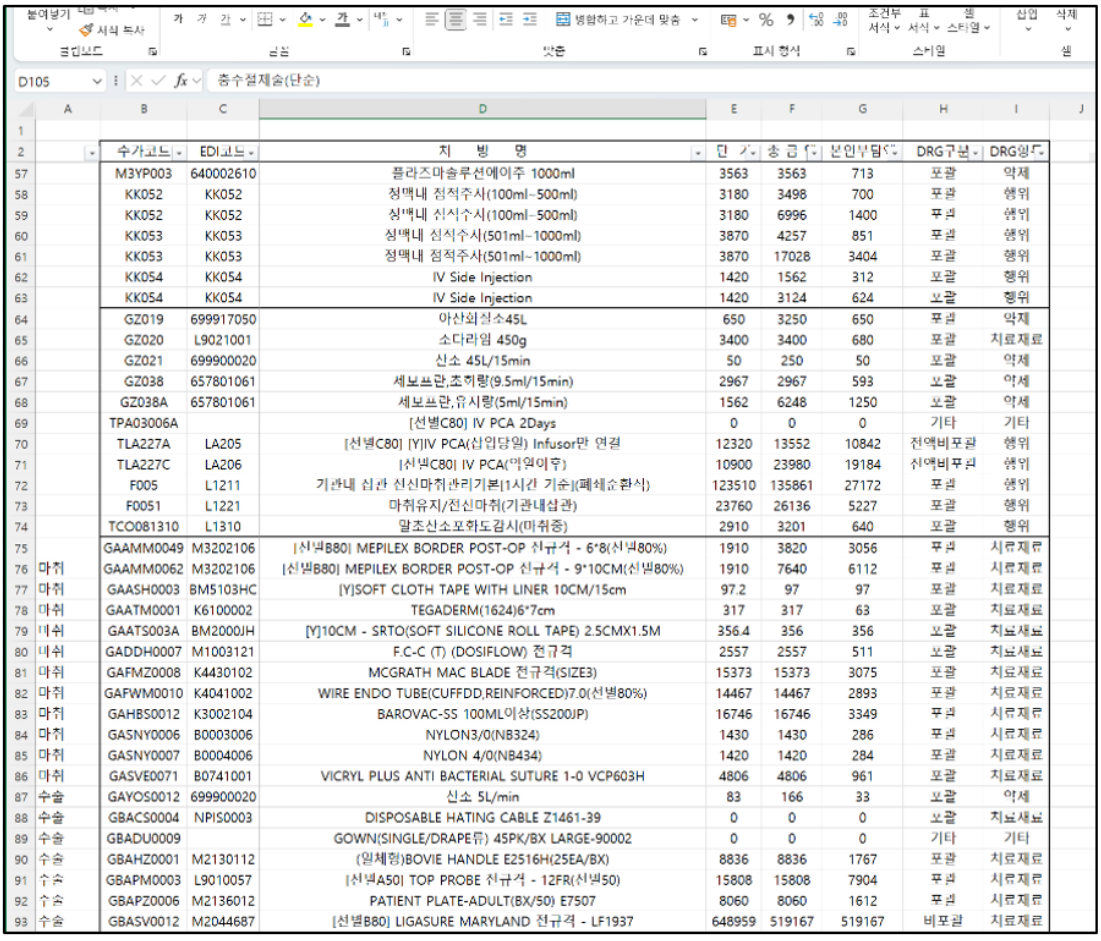
		ⓐ병동	ⓑ병동
병상수		42	69
근무자 (명)	간호사	21	17
	조무사	4	4
	이송	4	0
	PA간호사	5	0
	합계	32	21
병상가동율 (평균; %)		50	30
월급총액 (원)		8천3백만	4천8백만

3) 환자

	㉮환자	㉯환자	㉰환자
성별	남성	여성	여성
나이	60	54	45
기저질환	당뇨	고혈압	없음
진단명	급성충수염(농양)	급성충수염(천공)	급성충수염(단순)
수술 전 검사 (지출에 포함)	APCT, 전신마취 혈액검사 (CBC, chem, elect, Liver, 감염표지), 소변, 심전도, X-ray	APCT, 전신마취 혈액검사 (CBC, chem, elect, Liver, 감염표지), 소변, 심전도, X-ray	APCT, 전신마취 혈액검사 (CBC, chem, elect, Liver, 감염표지), 소변, 심전도, X-ray
행위별수술코드	Q2863	Q2862	Q2861
포괄수술코드	G08302	G08301	G08300
수술시간 (분)	120	90	60
입원 (일)	9	7	4
술 후 식이시작	96	48	24
술 후 경과	4일 간 발열, WBC, CRP상승	2일 간 발열	특이사항 없음
처치	금식, 수액, 항생제 투여, Lab, X-ray	금식, 수액, 항생제 투여, Lab, X-ray	

2. (실 인건비를 반영하는) 지출 보정 과정

1) 환자 상태, 충수염 심각 단계별 3인의 환자를 선정
2) 환자들의 입원 과정 중 발생한 청구 항목 전체를 집계



D105 충수절제술(단순)

	A	B	C	D	E	F	G	H	I	J
1										
2		수가코드	EDI코드	치 방 명	단 가	총 금 액	본인부담액	DRG구분	DRG행위	
57		M3YP003	640002610	플라즈마솔루션에이주 1000ml	3563	3563	713	포괄	약제	
58		KK052	KK052	정맥내 점적주사(100ml~500ml)	3180	3498	700	포괄	행위	
59		KK052	KK052	정맥내 점적주사(100ml~500ml)	3180	6996	1400	포괄	행위	
60		KK053	KK053	정맥내 점적주사(501ml~1000ml)	3870	4257	851	포괄	행위	
61		KK053	KK053	정맥내 점적주사(501ml~1000ml)	3870	17028	3404	포괄	행위	
62		KK054	KK054	IV Side Injection	1420	1562	312	포괄	행위	
63		KK054	KK054	IV Side Injection	1420	3124	624	포괄	행위	
64		GZ019	699917050	아산화질소45L	650	3250	650	포괄	약제	
65		GZ020	L9021001	소다라임 450g	3400	3400	680	포괄	치료재료	
66		GZ021	699900020	산소 45L/15min	50	250	50	포괄	약제	
67		GZ038	657801061	세보프란,초기량(9.5ml/15min)	2967	2967	593	포괄	약제	
68		GZ038A	657801061	세보프란,유시량(5ml/15min)	1562	6248	1250	포괄	약제	
69		TPA03006A		[선별C80] IV PCA 2Days	0	0	0	기타	기타	
70		TLA227A	LA205	[선별C80] [Y]IV PCA(삽입당일) Infusor만 연결	12320	13552	10842	전액비포괄	행위	
71		TLA227C	LA206	[선별C80] IV PCA(익일이후)	10900	23980	19184	전액비포괄	행위	
72		F005	L1211	기관내 삽관 신신마취관리기본(1시간 기준)(폐쇄순환식)	123510	135861	27172	포괄	행위	
73		F0051	L1221	마취유지/전신마취(기관내삽관)	23760	26136	5227	포괄	행위	
74		TCO081310	L1310	말초산소포화도감시(마취중)	2910	3201	640	포괄	행위	
75		GAAMM0049	M3202106	[선별B80] MEPILEX BORDER POST-OP 전규격 - 6*8(선별80%)	1910	3820	3056	포괄	치료재료	
76	마취	GAAMM0062	M3202106	[선별B80] MEPILEX BORDER POST-OP 전규격 - 9*10CM(선별80%)	1910	7640	6112	포괄	치료재료	
77	마취	GAASH0003	BM5103HC	[Y]SOFT CLOTH TAPE WITH LINER 10CM/15cm	97.2	97	97	포괄	치료재료	
78	마취	GAATM0001	K6100002	TEGADERM(1624)6*7cm	317	317	63	포괄	치료재료	
79	마취	GAATS003A	BM2000JH	[Y]10CM - SRTO(SOFT SILICONE ROLL TAPE) 2.5CMX1.5M	356.4	356	356	포괄	치료재료	
80	마취	GADDH0007	M1003121	F.C-C (T) (DOSIFLOW) 전규격	2557	2557	511	포괄	치료재료	
81	마취	GAFMZ0008	K4430102	MCGRATH MAC BLADE 전규격(SIZE3)	15373	15373	3075	포괄	치료재료	
82	마취	GAFWM0010	K4041002	WIRE ENDO TUBE(CUFFDD,REINFORCED)7.0(선별80%)	14467	14467	2893	포괄	치료재료	
83	마취	GAHBS0012	K3002104	BAROVAC-SS 100ML이상(SS200JP)	16746	16746	3349	포괄	치료재료	
84	마취	GASNY0006	B0003006	NYLON3/0(NB324)	1430	1430	286	포괄	치료재료	
85	마취	GASNY0007	B0004006	NYLON 4/0(NB434)	1420	1420	284	포괄	치료재료	
86	마취	GASVE0071	B0741001	VICRYL PLUS ANTI BACTERIAL SUTURE 1-0 VCP603H	4806	4806	961	포괄	치료재료	
87	수술	GAYOS0012	699900020	산소 5L/min	83	166	33	포괄	약제	
88	수술	GBACS0004	NPIS0003	DISPOSABLE HATING CABLE Z1461-39	0	0	0	포괄	치료재료	
89	수술	GBADU0009		GOWN(SINGLE/DRAPE류) 45PK/BX LARGE-90002	0	0	0	기타	기타	
90	수술	GBAHZ0001	M2130112	(일체형)BOVIE HANDLE E2516H(25EA/BX)	8836	8836	1767	포괄	치료재료	
91	수술	GBAPM0003	L9010057	[선별A50] TOP PROBE 전규격 - 12FR(선별50)	15808	15808	7904	포괄	치료재료	
92	수술	GBAPZ0006	M2136012	PATIENT PLATE-ADULT(BX/50) E7507	8060	8060	1612	포괄	치료재료	
93	수술	GBASV0012	M2044687	[선별B80] LIGASURE MARYLAND 전규격 - LF1937	648959	519167	519167	비포괄	치료재료	

그림 1. 병원 OCS 청구 항목들

3) 행위 중 마취/수술인건비를 포함하는 항목을 지출에서 뺌

4) 마취/수술인건비(직접비)를 계산(인력 별 시급 x 수술 시간 x 투여 비중) 한 후 더함

5) 마취/수술간접비를 더함 (2019년 외과수술별 간접비 조사. 외과학회)

6) 행위 중 입원인건비를 포함하는 항목을 지출에서 뺌

7) 해당 환자 병동 처치에 소모된 병동인건비(직접비)를 계산(월간 병동 소속 인력 월급 합계 x 해당 환자 입원 시간 / 월 병동입원환자전체 입원 시간)

8) 병동 입원인건비의 간접비를 더함 (통상 10% 책정)

9) 응급 수술인 경우 수입 부분에서 변동이 있는 마취/수술 행위에 1.2배 가산을 적용하고, 수술팀의 시간당 인건비에 1.5를 곱함

3. 질환, 병원, 병종, 지불시스템을 반영하는 지출 시뮬레이터 제작

1) 충수염 심각도, 수술실과 병실 운영 여건, 병종(상급종합/종합/병원/의원), 지불시스템(행위별/포괄/신포괄)을 입력 변수로 변경 가능하도록 설정

2) 선정된 3인의 환자가 각기 다른 지불시스템을 가지고 있는 다른 병원에서 수술을 받고 입원하여 치료를 받았을 경우, 예상되는 수입과 지출을 가상으로 계산

3) 응급 수술인 경우 수입과 지출이 어떻게 바뀌는지 역시 시뮬레이팅 함

4. 결과

1) 단순충수염 (복강경 수술, Q2861/G08300)

	행위별수가제		포괄수가제		신포괄수가제	
	종합병원	병원	종합병원	병원	종합병원	병원
수입	4,360,732	4,360,732	3,120,670	2,639,720	3,894,071	3,115,257
지출	4,098,214	3,913,399	4,098,214	3,913,399	4,098,214	3,913,399
차액	262,518	447,333	-977,544	-1,273,679	-204,143	-798,142

- 수술 후 3일 간 입원한 단순충수염 환자의 경우, 실인건비로 보정한 경우, **1백 2십 7만원의 매우 큰 적자가 발생**하였다. (병의원 포괄수가제 당연지정제도로 의미가 없으나) 행위별 수가제를 시행하고 있다 가정하면, 45만원의 흑자가, 신포괄수가제라면 79만원의 적자가 발생한다. 참여한 종합병원인 A병원으로 시뮬레이션 해도, 약간의 차이가 있을 뿐, 마찬가지로 **매우 큰 적자가 발생**함

2) 천공충수염 (복강경 수술, Q2862/G08301)

	행위별수가제		포괄수가제		신포괄수가제	
	종합병원	병원	종합병원	병원	종합병원	병원
수입	4,707,993	4,707,993	4,567,270	3,893,980	4,794,220	3,835,376
지출	4,663,968	4,323,181	4,663,968	4,323,181	4,663,968	4,323,181
차액	44,025	384,812	-96,698	-429,201	130,252	-487,805

- 수술 후 6일간 입원하며 수술 후 2일 간 금식 하에 검사, 수액투여, 항생제 치료를 시행한 환자로, 약간의 폭이 감소하기는 했지만, 많은 경우에서 적자임을 알 수 있음

3) 충수주위농양 (복강경 수술, Q2863/G08302)

	행위별수가제		포괄수가제		신포괄수가제	
	종합병원	병원	종합병원	병원	종합병원	병원
수입	5,761,451	5,761,451	5,804,700	4,940,680	5,891,530	4,713,224
지출	5,749,502	5,316,307	5,749,502	5,316,307	5,749,502	5,316,307
차액	11,949	445,144	55,198	-375,627	142,028	-603,083

- 증상이 발생하고 5일이 경과하여 병원을 방문한 환자로, 수술 후 8일 간 입원 기간 중에 4일 간 계속된 발열로 금식, 검사, 수액투여, 항생제 및 해열제 투여 등의 치료가 시행되었다. 역시 대부분의 경우에서 적자가 발생한다

4) (응급/야간) 복강경 단순충수염

	행위별수가제		포괄수가제		신포괄수가제	
	종합병원	병원	종합병원	병원	종합병원	병원
수입	4,497,442	4,497,442	3,257,380	2,776,430	4,030,781	3,251,966
지출	4,219,620	4,051,295	4,219,620	4,051,295	4,219,620	4,051,295
차액	277,822	446,146	-962,240	-1,274,866	-188,839	-799,329

- 응급/야간 수술의 경우, 수술과 마취 수가에서 1.2배 가산이 있지만, 수술에 참여하는 인력에게 주간 인건비의 1.5배를 지급해야 함. 가산금과 지출금 증감을 반영하여 계산해 보면, 단순충수염의 경우, 비응급 수술과 비슷한 정도로 적자가 발생하는 것을 볼 수 있음

5) (응급/야간) 복강경 충수염 (천공)

	행위별수가제		포괄수가제		신포괄수가제	
	종합병원	병원	종합병원	병원	종합병원	병원
수입	4,850,859	4,850,859	4,710,136	4,036,846	4,937,086	3,978,242
지출	4,846,076	4,530,025	4,846,076	4,530,025	4,846,076	4,530,025
차액	4,783	320,834	-135,940	-493,179	91,010	-551,783

- 수술 시간이 길어지는 경우, **가산되는 금액과 비교하여, 참여하는 인력의 인건비 상승폭이 크게 되며, 이 만큼의 적자가 더 발생**하게 됨

6) (응급/야간) 복강경 충수염 (농양)

	행위별수가제		포괄수가제		신포괄수가제	
	종합병원	병원	종합병원	병원	종합병원	병원
수입	5,904,317	5,904,317	5,947,566	5,083,546	6,034,396	4,856,090
지출	5,992,312	5,592,100	5,992,312	5,592,100	5,992,312	5,592,100
차액	-87,995	312,217	-44,746	-508,554	42,084	-736,010

5. 미비한 점, 향 후 보완할 점

1) 준비 과정이 촉박하여 상급종합병원과 의원급 실제 충수절제술 환자를 본 프로그램에 포함시키지 못함

2) 수집한 3인이 모두 낮 시간에 진행되었으며, 의료기관에서 삭감의 우려로 응급 가산을 신청하지 않음. 실제 야간에 수술한 내역을 포함시킬 필요가 있음

3) 직접비에 포함된 의료진의 인건비 이외, 간접비에 포함된 인건비 (청소/전산/유지보수팀)와 대지비, 건물사용비, 수도세, 전기세, 폐기물처리비 등은 반영하지 못함

4) 턱없이 낮게 측정되어 있는 몇 몇 간접비를 보정하지 못함 (복강경수가 중 복강경 장비를 10만 회 사용하는 것으로 계산됨)

5) 사회가 노령화 되어감에 따라, 노인 충수염이 증가하고, 기저 질환을 갖고 있는 상태에서 충수염 수술을 받는 경우가 많아지고 있는데, 포괄수가제의 경우, 치료 비용이 크게 증가하지 않는 경우, 이를 전혀 반영하지 않음. 입원 기간 중 충수염 이외, 기저 질환 등으로 중환자실 치료를 시행하는 등의 중증 환자군을 포함시켜 연구할 필요가 있음

CURRICULUM VITAE

Discussant

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건강보험심사평가원 창원지원 심사평가부 부장
건강보험심사평가원 급여기준실 급여기준개선부 부장

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CURRICULUM VITAE

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2009.02	차의과학대학교 통합의학과 석사
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2013.12-2018.12	동아일보 정책사회부 차장(보건복지, 식약처, 노동환경부 총괄)
2001.03-현재	동아일보 의학전문기자
2001.02	서울대병원 인턴
2023.04	보건의 날 대통령표창
2021.05~현재	한국의학바이오기자협회 부회장
2021.05~현재	대한신경외과학회 홍보대사
2019.04~현재	노인의료나눔재단 홍보대사
2019.12	응급의료 보건복지부 장관상
2018.07~2020.07	한국보건의료연구원 비상임이사
2017.10	정신건강 보건복지부 장관상
2014.11-2018.10	한국건강관리협회 건강증진 전문위원
2011.10-2015.09	건강보험심사평가원 미래전략위원회 위원

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2024 대장일 골드리본 캠페인 정책 심포지엄

필수의료 최전선
대장항문외과 방어전략

Session 2

대장항문외과: 정규수술 적정보상 없으면 소멸한다

강성범 (대한대장항문학회 이사장)
남우정 (대한대장항문학회 정책연구단장, 필수의료 TFT 위원장)

CURRICULUM VITAE

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Session 2

양성항문질환 수가 제안

최동현 (한사랑병원)

1. 들어가기

현재의 의료사태는 일방적인 의대증원으로부터 시작되었지만 K-의료로 추앙받던 한국의료가 사실은 썩어가고 있는 동아줄에 매달려 있었다는 것은 공공연한 비밀이었다. 지금의 사태는 근근히 버텨오던 동아줄을 한층 더 갉아버린 꼴이 되어 버렸다. 이제 더 이상 버틸 힘이 없는 것이다.

이상적인 의료환경이란 무엇일까? 그것은 의료소비자가 낮은 비용으로 양질의 의료에 쉽게 접근할 수 있는 환경이라고 할 수 있을 것이다. 지금까지 한국 의료는 세마리 토끼를 간신히 붙잡고 있었다고 볼 수 있다. 하지만 지금과 같은 환경이 유지된다면 한국의 의료는 지속될 수 있을 것인가? 특히 필수의료의 첨병이라고 할 있는 외과는 그 붕괴속도가 그 어느 전문과보다 더 가속되고 있는 상황인데 과연 두고만 볼 것인가? 해결책은 없는 것인가?

치핵, 치열, 치루로 대표되는 양성항문질환은 대장항문외과 개원가의 토대가 되는 질환군이다. 특히 치핵수술은 한해 15만건 이상 시행되어 다빈도 수술 3위를 차지하고 있는 대표적인 외과수술이다. 때문에 양성항문질환에 대한 전망이 보장되지 않는다면 대장항문외과의 미래도 불투명할 수 밖에 없다. 이런 상황에서 전공의는 결코 불투명한 미래에 자신을 내맡기지는 않을 것이다. 즉 개원가의 미래와 전공의 지원율은 정비례의 관계에 있다고 볼 수 있다.

〈연도별 다빈도 수술의 수술건수 추이〉

(단위: 건, %)

구분			2018년	2019년	2020년	2021년	2022년	전년대비 증감률	연평균 증감률
순위		계(34개주요수술)	1,870,385	1,996,261	1,953,665	2,097,494	2,067,715	Δ1.4	2.5
상위	1	백내장 수술	592,191	689,919	702,621	781,220	735,693	Δ5.8	5.6
	2	일반 척추수술	176,522	183,908	188,394	201,197	203,902	1.3	3.7
	3	치핵 수술	179,073	170,850	169,669	160,441	156,432	Δ2.5	-3.3
⋮									
하위	1	뇌기저부 수술	365	520	513	520	526	1.2	9.6
	2	순열 및 구개열 수술	873	844	829	721	945	31.1	2.0
	3	전립선절제술 (경요도 제외)	2,084	2,227	1,853	1,545	1,380	Δ10.7	-9.8

주) 순위는 2022년 수술건수 기준(상·하위 3위)

〈표 1. 연도별 다빈도 수술의 수술건수 추이, 2022 주요수술 통계연보, 국민건강보험공단, 2023〉

2. 문제점

1) 저수가, 저평가

1977년 의료보험 도입 당시부터 원가 이하의 낮은 수가로 책정되었고 이는 2001년 도입된 상대가치제도에도 그대로 이어지게 되었다. 특히 노동이 주인 외과의 상대가치는 심각하게 저평가되었고 과별로 총점이 고정되어 있어 점수의 변동이 사실상 힘들게 되었다. 외과업무량의 상대가치총점이 전체 의과 총점의 2%에 불과하며 더군다나 외과 총점의 30%가 화상부문에 치중되어 있 기 때문에 이를 제외한다면 실제로는 전체 의과 총점의 1.4%라는 사실은 얼마나 외과가 상대가치제도하에 저평가 상태에 놓여있는지 알 수 있다(표2). DRG에 포함된 외과수술(충수염, 서혜부탈장, 항문질환군) 수가도 처음부터 심하게 낮게 책정된 상대가치를 토대로 책정이 되었고, 동일한 환산지수가 적용이 되기 때문에 해가 지날수록 격차는 더욱 벌어지게 되었다.

관리진료과	행위수	총점
내과 소화기내시경	60	2,402,180,408
마취통증의학과	110	5,920,279,067
비뇨의학과	221	1,068,017,642
산부인과	204	1,284,325,530
신경외과	154	281,482,176
안과	176	4,253,077,525
외과 전체	386	1,074,253,437
외과 간담췌	54	182,034,077
외과 내분비	18	47,825,472
외과 대장항문	103	171,621,406
외과 소아	39	16,608,046
외과 위암	34	70,944,118
외과 유방	14	102,642,346
외과 이식	1	7,330,409
외과 혈관	89	161,799,085
외과 화상	34	312,446,478
이비인후과	290	2,301,547,000
진단검사의학과(검체)	546	1,806,861,401
흉부외과	208	269,538,410

〈표 2. 관리 진료과별 총점, 각 진료과별 의사업무량(안), 의사협회 상대가치연구단〉

2) DRG에 종속된 외과 수술

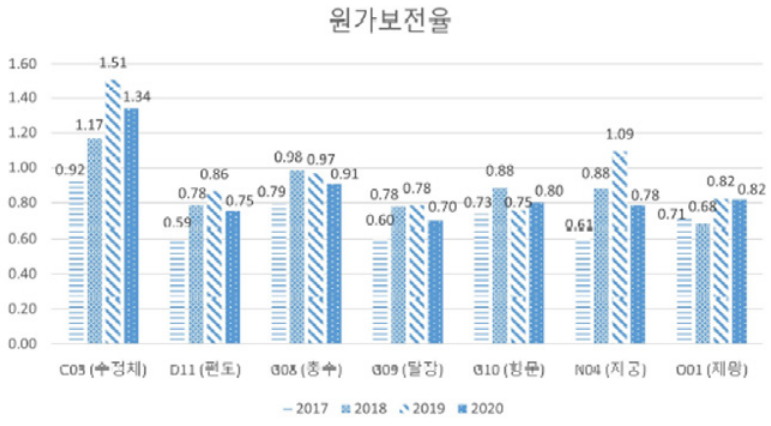
우리나라의 7개 질병군 포괄수가제는 1997년부터 시범사업을 거쳐 2013년에 전체의료기관에 적용되어 시행되고 있다. DRG는 불필요한 의료서비스 및 재원일수의 감축에 따라 진료 효율성을 증가시킨다는 장점이 있을 수 있지만 부적절한 조기퇴원이나 진료회피, 신의료기술 도입 저해 등으로 인해 의료의 질이 하락될 수 있다는 단점이 있다. 우리나라에서의 DRG는 행위에 대한 정당한 보상없이 비용통제의 수단으로 왜곡되어 도입된 측면이 있다. 우리나라의 경우 고가의 장비를 이용할 경우 수가에 유리하게 반영이 될 가능성이 있고, 애초에 저수가 문제가 잔존하는 현행 행위별수가제를 바탕을 DRG 수가가 설계되었기 때문에 저수가 문제는 DRG 질병군에도 그대로 투영되어 있다. 2020년 전까지는 DRG 해당 질환군은 별도의 조정기전 없이 수가협상 결과에 따른 환산지수 인상률만을 반영해왔기 때문에 처음부터 낮게 설정된 외과 DRG 질환군의 인상률은 상대적으로 미미했다고 볼 수 있다. 특히 7개 질병군 중 3개의 질병군이 외과에 해당되며, 이 세가지 질병군

은 모두 대장항문외과와 연관이 되어 있다(표3). 실제로 외과전문병원인 한사랑병원의 통계치를 보면 2024년 전반기에 전체 수술 건수 중 DRG 수술이 42.4%를 차지했다. 양성항문질환 비율이 높지않음(충수염: 서혜부탈장: 양성항문질환 비율, 39: 31: 30)에도 불구하고 상당히 높은 빈도로 외과병원에서 DRG 해당 수술이 이루어 지고 있음을 알 수 있다. 양성항문질환 수술이 대부분을 차지하는 대장항문외과의원의 경우는 거의 100%에 가깝게 DRG의 영향을 받고 있다. 2020년에 7개 질병군 포괄수가를 6.5% 인상한 바가 있으나 유독 양성항문질환은 동결되어 개원가의 공분을 샀던 적이 있다(표3). 외과영역에서의 DRG는 대장항문외과 저평가의 최전선에 있다고 해도 과언이 아닌다. 이미 수술행위료 자체가 낮게 책정되어 있기 때문에 행위료가 인상이 된다고 하더라도 정률인상이 지속된다면 해가 지날수록 격차는 벌어지게 되어있다. 최근의 연구에서도 외과계열 DRG군의 원가보존율은 여전히 기대에 미치지 못하고 있다(그림1). 또한 수술 난이도나 전문성(경력)에 대한 고려도 없으며, 위험도 반영도 미미하다. DRG의 장점인 업무효율화도 제대로 반영하지 못하고 오히려 삭감의 근거로 이용되고 있다. 기술발전, 숙련도에 따른 수술시간단축이 수술행위 총업무량 감소로 파악되어 점수가 오히려 하락하는 모순이 발생하는 것이다. 최근의 급격한 인건비 상승, 물가상승, 금융비용 상승과 같이 의료행위 원가에 직접적으로 영향을 미치는 '실질 비용'에 대한 현실적인 반영도 부족하다. 따라서 DRG 부문의 개혁이 없다면 외과살리기 정책을 펼친다고 해도 개원가에 미치지 못할 가능성이 높을 것이다.

(단위: %, 억원)

질병군(7)	현행 총 진료비(A)		개편수가 총진료비		
			수가(B)	수준(B/A)	차액(B-A)
	15,158	**100%**	**16,145**	**106.5%**	**987**
수정체	5,026	33.2%	5,535	**110.1%**	509
편도	367	2.4%	445	**121.3%**	78
충수	1,784	11.8%	1,832	**102.7%**	48
탈장	473	3.1%	540	**114.1%**	67
항문	2,181	14.4%	2,181	**100.0%**	-
자궁	2,565	16.9%	2,809	**109.5%**	244
제왕절개	2,762	18.2%	2,803	**101.5%**	41

〈표 3. 7개 질별군 포괄수가 개편, 보건복지부, 2019〉



〈그림 1. 원가보전율, 비용기반 포괄수가 조정방안, 박은철, 2022〉

3. 다른 나라와의 수가 비교: 양성항문질환

양성항문질환의 수가도 다른 나라와 비교해서 현저히 낮은 수준을 유지하고 있다. 저자는 본고를 준비하면서 대표적인 양성항문질환인 치핵절제술에 대한 나라별 비용에 대해 ChatGPT에 질문해보았다. 그 결과는 다음과 같다(표 4).

Country	Estimated Cost (USD)
United States	$2,000 - $14,000
United Kingdom	$1,950 - $3,900
Canada	$1,130 - $2,260
Australia	$2,020 - $4,040
Mexico	$2,800 - $5,460
Thailand	$1,400 - $2,000
Spain	$2,240 - $2,800
Japan	$1,100 - $3,700
South Korea	$1,000 - $3,000

〈표 4. ChatGPT가 알려준 나라별 치핵절제술 비용
https://chatgpt.com/c/1c8114bf-19a1-44d7-98a0-2e5816e54b7a〉

표에서 처럼 치핵절제술에 대한 비용이 많게는 10배이상 차이가 났다. 실제로 수술비용 분석 사이트인 코스트헬퍼헬스(https://health.costhelper.com)에서 치핵수술비용을 검색해보면 $9,000~$12,000에 이른다는 것을 알 수 있다. MDSAVE(https://www.mdsave.com)에서는 미국의 평균 치핵수술비용이 $10,056 라고 분석하고 있다. 의료비용이 매우 높다고 알려진 미국은 차치하고, 유럽의 경우도 한국보다 2-3배 정도 높다고 여겨진다. 스페인의 경우 Operarme(https://www.operarme.com)라는 수술전문병원에서 치핵수술비용으로 2,090유로(한화 약 310만원)를 제시하고 있다.

미국과 유럽의 경우 우리나라와 의료제도도 상이하고 사회, 문화, 경제력의 차이도 있기 때문에 최근 우리나라와 구매력지수가 거의 유사해진 일본과의 비교도 의미가 있을 것이다. 우리나라의 경우 '건강보험 행위 급여 비·급여 목록표 및 급여상대가치점수'가 보건복지부 고시를 통해 행위 별 상대가치점수를 공개하고 있다(표 5). 부여된 상대가치점수에 환산지수를 곱하게 되면 행위에 대한 의료수가가 되는 것이다. 즉 치핵근치술의 경우 상대가치점수 3,202.38에 의원급 환산지수 93.6원을 곱하게 되면 299,743원에 의원급 치핵근치술의 수가가 된다. 일본의 경우도 医科診療報酬点数表(의과 진료 보상점수표)에 질환별 가치점수가 부여되어 있고, x 10을 하게 되면 그 행위에 대한 수가(엔)가 되는 것이다(그림 2, 표 6). 일본의 경우 치핵근치술은 6,520점이며 수가는 65,200엔(원화 597,884원, 9.17원/엔)이 되는 것이다. 단순비교만 해도 우리나라의 수가가 일본의 1/2 정도에 불과하다는 것을 알 수 있다.

표 7은 한국과 일본의 양성항문질환에 대한 수가 비교표이다. 수술방법에 차이가 있어 직접 비교하기 어려운 경우도 있지만, 주요 항문수술에 대한 일본대비 한국병의원수가가 혈전제거술을 제외하고 40%~80% 정도에 이른다는 것을 알 수 있다.

한국					
분류번호	코 드	분 류	점 수	의원수가 (x 93.6)	병원수가 (x 81.2)
자-301		치핵수술 Operation of Hemorrhoids			
	Q3015	가. 혈전제거술 및 췌피절제술 Thrombectomy and Excision of Skin	1,729	161,840	140,400
	Q3016	나. 응고, 소작 [레이저 포함], 경화요법 및 고무밴드 결찰술 Coagulation, Cauterization [including Laser], Sclerotherapy, Rubber	1,702	159,327	138,219
		주 : 동시에 여러 부위를 시술한 경우에도 1회만 산정한다.			
	Q3012	다. 혈전성치핵(내치핵) 절제술 Excision of Thrombosed Hemorrhoids	1,866	174,661	151,522
	Q3013	라. 치핵근치술 Hemorrhoidectomy	3,202	299,743	260,033
	Q3014	주 : 1. 교액성환상치핵 수술의 경우에는 3,781.59점을 산정한다.	3,782	353,957	307,065
	Q3017	2. 원형자동문합기를 이용하여 치핵절제술을 실시한 경우에는 2,889.18점을 산정하며, 시술시 사용된 원형자동문합기는 별도 산정한다.	2,889	270,427	234,601
		원형봉합기 비용 381,010 포함시		651,437	615,611
자-299		항문협착증 교정술 Operation for Anal Stricture			
	Q2991	가. 항문협착부위절단술 Anal Stricturotomy	2,175	203,615	176,640
	Q2992	나. 피부판, 피부편 이용 Use of Skin Flap or Skin Graft	2,793	261,400	226,770
			2,175	203,615	176,640
자-299-1	Q2996	항문협착확장술 [Hegar Dilator, 수지 등 이용의 경우] Anal Dilatation	133	12,468	10,816
자-300-1		항문괄약근성형술 [변실금 등 상병] Anal Sphincteroplasty			
	Q3002	가. 괄약근만 성형 Only Sphincteroplasty	2,829	264,750	229,677
	Q3003	나. 괄약근 및 거상근 성형 Sphincteroplasty and Levatoroplasty	3,456	323,499	280,643
자-304		모소동 수술 Operation of Pilonidal Sinus			
	Q3041	가. 조대술 Marsupialization	2,031	190,122	164,935
	Q3042	나. 절제술 Wide Excision	2,419	226,434	196,437
자-305	Q3050	항문관 직장관내 콘딜로마 치료 Removal of Condyloma, Anal Canal or Rectum	721	67,502	58,560
자-295	Q2950	치열수술 Operation of Anal Fissure	1,976	184,912	160,415
자-297		치루수술 Operation of Anal Fistula			
	Q2974	가. 저위관통형치루절개술 및 절제술 Low Type Anal Fistulotomy and Fistulectomy	2,782	260,386	225,890
		나. 고위 혹은 복잡형 High or Complicated Type			
	Q2975	(1) 한리수술 및 기타 괄약근보존술식 Hanley's Operation and Other Sphincter Preserving Procedure	2,918	273,101	236,921
	Q2976	(2) 근충전술 혹은 점막근육편이동 Muscle Filling Operation or Rectal Mucosal Advancement Flap Operation	3,004	281,180	243,930
		(3) 시톤수술 Seton Procedure			
	Q2977	(가) 설치술 Seton Apply	2,668	249,770	216,681
	Q2978	(나) 절단술 Division of Sphincter Muscle	1,344	125,832	109,162
	Q2979	(다) 단계적교액술 Seton Tightening	746	69,836	60,584
		주 : 시톤설치술 후 치료과정이 종결될 때까지 여러 회 실시하더라도 1회만 산정한다.			
		직장항문 주위농양수술 Operation of Periproctal Abscess			
		가. 표재성 Superficial			
	Q2881	(1) 절개배농 Incision and Drainage	1,755	164,292	142,527
	Q2882	(2) 괄약근절개 동반 with Anal Sphincterotomy	1,910	178,767	155,084
	Q2883	나. 심부 Deep	2,118	198,210	171,952

〈표 5. (제2023-187호)건강보험 행위 급여·비급여 목록표 및 급여 상대가치점수_일부개정 (보건복지부 고시, 2023.10.10.)〉

K７４３	痔核手術（脱肛を含む。）	
1	硬化療法	1,660点
2	硬化療法（四段階注射法によるもの）	4,010点
3	結紮術、焼灼術、血栓摘出術	1,390点
4	根治手術（硬化療法（四段階注射法によるもの）を伴わないもの）	5,190点
5	根治手術（硬化療法（四段階注射法によるもの）を伴うもの）	6,520点
6	ＰＰＨ	11,260点

〈그림 2. 일본 수가점수표, 医科診療報酬点数表, 치핵수술 부분 발췌〉

일본			
분류	점수	수가 (x10엔)	원화환산 (X9.17원)
치핵수술			
경화 요법	1,660	16,600	152,222
경화 요법(4단계 주사법에 의한 것)	4,010	40,100	367,717
결찰술, 소작술, 혈전 적출술	1,390	13,900	127,463
근치 수술(경화 요법(4단계 주사법에 의한 것)을 수반하지 않는 것)	5,190	51,900	475,923
근치 수술(경화 요법(4단계 주사법에 의한 것)을 수반하는 것)	6,520	65,200	597,884
PPH (자동 문합기 등의 비용은 소정 점수에 포함되며, 별도로 산정할 수 없다)	11,260	112,600	1,032,542
	11,260	112,600	1,032,542
항문형성수술			
1.항문협착형성수술	5,210	52,100	477,757
2.직장점막탈형성수술	7,710	77,100	707,007
치질수술 후 협착확장 수술	5,360	53,600	491,512
직장부지법	150	1,500	13,755
항문확장법(도수 또는 부지)	150	1,500	13,755
항문괄약근 형성 수술			
1 흉터 절제 또는 봉축에 의한 것	3,990	39,900	365,883
2 조직 치환에 의한 것	23,660	236,600	2,169,622
모소낭, 모소루, 모소동 수술	3,680	36,800	337,456
항문양성종양, 항문폴립, 항문점규콘딜로마절제술	1,250	12,500	114,625
균열 또는 항문궤양 근치수술	3,110	31,100	285,187
치루수술			
1.간단한 것	3,750	37,500	343,875
2.복잡한 것	7,470	74,700	684,999
	7,470	74,700	684,999
	3,750	37,500	343,875
항문주위 농양절개술	2,050	20,500	187,985
직장주위 농양절개술	2,610	26,100	239,337

〈표 6. 일본수가표에 따른 양성항문질환 수가〉

〈표 7. 한국과 일본의 양성항문질환에 대한 수가 비교〉

한국						일본					
분류번호	코 드	분 류	점 수	의원수가 (x 93.6)	병원수가 (x 81.2)	분류	점수	수가 (x10엔)	원화환산 (X9.17원)	일본대비 한국의원수가	일본대비 한국병원수가
자-301		치핵수술 Operation of Hemorrhoids				치핵수술					
	Q3015	가. 혈전제거술 및 췌피절제술 Thrombectomy and Excision of Skin	1,729	161,840	140,400	경화 요법	1,660	16,600	152,222	1.063	0.922
	Q3016	나. 응고, 소작 [레이저 포함], 경화요법 및 고무밴드 결찰술 Coagulation, Cauterization [including Laser], Sclerotherapy, Rubber	1,702	159,327	138,219	경화 요법(4단계 주사법에 의한 것)	4,010	40,100	367,717	0.433	0.376
		주 : 동시에 여러 부위를 시술한 경우에도 1회만 산정한다.				결찰술, 소작술, 혈전 적출술	1,390	13,900	127,463	1.250	1.084
	Q3012	다. 혈전성치핵(내치핵) 절제술 Excision of Thrombosed Hemorrhoids	1,866	174,661	151,522						
	Q3013	라. 치핵근치술 Hemorrhoidectomy	3,202	299,743	260,033	근치 수술(경화 요법(4단계 주사법에 의한 것)을 수반하지 않는 것)	5,190	51,900	475,923	0.630	0.546
	Q3014	주 : 1. 교액성환상치핵 수술의 경우에는 3,781.59점을 산정한다.	3,782	353,957	307,065	근치 수술(경화 요법(4단계 주사법에 의한 것)을 수반하는 것)	6,520	65,200	597,884	0.592	0.514
	Q3017	2. 원형자동문합기를 이용하여 치핵절제술을 실시한 경우에는 2,889.18점을 산정하며, 시술시 사용된 원형자동문합기는 별도 산정한다.	2,889	270,427	234,601	PPH (자동 문합기 등의 비용은 소정 점수에 포함되며, 별도로 산정할 수 없다)	11,260	112,600	1,032,542		
		원형봉합기 비용 381,010 포함시		651,437	615,611		11,260	112,600	1,032,542	0.631	0.596
자-299		항문협착증 교정술 Operation for Anal Stricture				항문형성수술					
	Q2991	가. 항문협착부위절단술 Anal Stricturotomy	2,175	203,615	176,640	1.항문협착형성수술	5,210	52,100	477,757	0.426	0.370
	Q2992	나. 피부판, 피부편 이용 Use of Skin Flap or Skin Graft	2,793	261,400	226,770	2.직장점막탈형성수술	7,710	77,100	707,007	0.370	0.321
			2,175	203,615	176,640	치질수술 후 협착확장 수술	5,360	53,600	491,512	0.414	0.359
자-299-1	Q2996	항문협착확장술 [Hegar Dilator, 수지 등 이용의 경우] Anal Dilatation	133	12,468	10,816	직장부지법	150	1,500	13,755	0.906	0.786
						항문확장법(도수 또는 부지)	150	1,500	13,755		
자-300-1		항문괄약근성형술 [변실금 등 상병] Anal Sphincteroplasty				항문괄약근 형성 수술					
	Q3002	가. 괄약근만 성형 Only Sphincteroplasty	2,829	264,750	229,677	1 홈터 절제 또는 봉축에 의한 것	3,990	39,900	365,883	0.724	0.628
	Q3003	나. 괄약근 및 거상근 성형 Sphincteroplasty and Levatoroplasty	3,456	323,499	280,643	2 조직 치환에 의한 것	23,660	236,600	2,169,622		
자-304		모소동 수술 Operation of Pilonidal Sinus									
	Q3041	가. 조대술 Marsupialization	2,031	190,122	164,935	모소낭, 모소루, 모소동 수술	3,680	36,800	337,456	0.563	0.489
	Q3042	나. 절제술 Wide Excision	2,419	226,434	196,437						
자-305	Q3050	항문관 직장관내 콘딜로마 치료 Removal of Condyloma, Anal Canal or Rectum	721	67,502	58,560	항문양성종양, 항문폴립, 항문첨규콘딜로마절제술	1,250	12,500	114,625	0.589	0.511
자-295	Q2950	치열수술 Operation of Anal Fissure	1,976	184,912	160,415	균열 또는 항문궤양 근치수술	3,110	31,100	285,187	0.648	0.562
자-297		치루수술 Operation of Anal Fistula				치루수술					
	Q2974	가. 저위관통형치루절개술 및 절제술 Low Type Anal Fistulotomy and Fistulectomy	2,782	260,386	225,890	1.간단한 것	3,750	37,500	343,875	0.757	0.657
		나. 고위 혹은 복잡형 High or Complicated Type									
	Q2975	(1) 한리수술 및 기타 괄약근보존술식 Hanley's Operation and Other Sphincter Preserving Procedure	2,918	273,101	236,921	2.복잡한 것	7,470	74,700	684,999	0.399	0.346
	Q2976	(2) 근충전술 혹은 점막근육편이동 Muscle Filling Operation or Rectal Mucosal Advancement Flap Operation	3,004	281,180	243,930		7,470	74,700	684,999	0.410	0.356
		(3) 시톤수술 Seton Procedure									
	Q2977	(가) 설치술 Seton Apply	2,668	249,770	216,681		3,750	37,500	343,875	0.726	0.630
	Q2978	(나) 절단술 Division of Sphincter Muscle	1,344	125,832	109,162						
	Q2979	(다) 단계적교액술 Seton Tightening	746	69,836	60,584						
		주 : 시톤설치술 후 치료과정이 종결될 때까지 여러 회 실시하더라도 1회만 산정한다.									
		직장항문 주위농양수술 Operation of Periproctal Abscess									
		가. 표재성 Superficial									
	Q2881	(1) 절개배농 Incision and Drainage	1,755	164,292	142,527	항문주위 농양절개술	2,050	20,500	187,985	0.874	0.758
	Q2882	(2) 괄약근절개 동반 with Anal Sphincterotomy	1,910	178,767	155,084						
	Q2883	나. 심부 Deep	2,118	198,210	171,952	직장주위 농양절개술	2,610	26,100	239,337	0.828	0.718

또한 일본의 경우 수술전/후 의학관리료가 별도로 산정되어 있다(표 8).

일본			
분류	점수	수가 (x10엔)	원화환산 (X9.17원)
수술전 의학관리료	1,192	11,920	109,306
수술 후 의학관리료(1일당)			
1.병원	1,188	11,880	108,940
2.의원	1,056	10,560	96,835

〈표 8. 일본의 수술전/후 의학관리료〉

4. 우리나라 치핵절제술 수가

대표적인 대장항문외과 개원가 수술인 치핵절제술을 들여다보면 현재 개원가가 처한 상황을 알 수 있을 것이다. 다음 표는 원형봉합기를 이용한 치핵절제술을 시행했을 때의 세부 진료비 내역이다(표 9).

항목	세부항목 - 항목명	수가	용량	총계	원가
진찰료 (94,370원)	재진진찰료	12,290	1	12,290	94,370
	수술실 한자 안전관리료-3등급	19,700	1	19,700	
	야간전담간호사관리료	5,070	3	15,210	
	야간간호료	4,330	3	12,990	
	전문병원관리료 (입원관리료)	2,270	3	6,810	
	전문병원 의료질평가지원금 (입원)	8,210	3	24,630	
	전문병원 의료질평가지원금 (외래)	2,740	1	2,740	
입원료 (203,820원)	1등급간호관리료적용 기본입원료	67,940	3	203,820	203,820
식대 (31,350원)	일반식 (1식당)	4,860	2	9,720	3,632 x5
	일반식 (1식당)	4,860	3	14,580	
	영양사 가산 (1식당)	620	3	1,860	18,650
	영양사 가산 (1식당)	620	2	1,240	
	조리사 가산 (1식당)	570	3	1,710	
	조리사 가산 (1식당)	570	2	1,140	
	직영가산	220	3	660	
	직영가산	220	2	440	
경구약 (4,567원)	레녹스정(일동제약)	99	2	198	4,567
	레녹스정(일동제약)	99	12	1,188	
	실콘정(명문제약)	85	13	1,105	
	마그밀정(삼남제약)	23	1	23	
	후라시닐정(이노엔)	73	13	949	
	디소론캡슐(한국콜마)	184	6	1,104	
조제료(7,880원)	외래한자 의약품관리료(방문당)-병원급 의・치과	70	1	70	7,880
	입원한자의약품관리료 (3일분)	2,340	1	2,340	
	퇴원한자조제료-내복약(3일분/1회)	370	1	370	
	입원한자 조제-복약지도료 (1일당)	1,700	3	5,100	
주사료 (26,484원)	0.9% N/S 100ml(이노엔)	1,304	1	1,304	26,484
	H/S 1000ml(이노엔)	1,675	5	8,375	
	멸균생리식염수 20ml(대한약품)	275	2	550	
	마케인헤비주20mg/4ml	2,651	1	2,651	
	세포테탄나트륨주1g (국제)	6,362	2	12,724	
	정맥내유지침	440	2	880	
주사수기료 (14,790원)	정맥내 점적주사-100ml~500ml	3,180	1	3,180	14,790
	정맥내 점적주사-501ml~1000ml	3,870	3	11,610	
마취료 (125,650원)	척추마취관리기본 [1시간 기준]	99,520	1	99,520	125,650
	마취중 말초산소포화도감시	2,910	1	2,910	
	정맥내 주입(IV PCA)-시술당일 확보된 주입로	12,320	1	12,320	
	정맥내 주입(IV PCA)-익일 이후	10,900	1	10,900	
마취재료대(55,484원)	PCA	53,130	1	53,130	55,484
	리도에피네프린주1.8ml(휴온스)	420	1	420	
	명문염산부피바카인헤비주사0.5%(명문제약)	1,934	1	1,934	
수술비 (304,980원)	**치핵근치술(원형자동문합기이용하여시술)** -외과전문의가산 30% -종별가산율 5%	304,980	1	411,723	411,723
수술재료대 (431,910원)	Black silk 2/0(SK225)	1,480	1	1,480	431,910
	프로펜(ETHICON)/2-0 W8977	4,320	1	4,320	
	NOVOSYN/3-0(HR22)	3,560	2	7,120	
	SCON	381,010	1	381,010	
	보비펜슬	8,880	1	8,880	
	보비플레이트	8,100	1	8,100	
	큐탄플라스트스프지Anal(큐어시스)	15,000	1	15,000	
처치료 (18,290원)	단순처치 (1일당)	6,130	1	6,130	18,290
	좌욕(1일당)	2,070	2	4,140	
	글리세린관장. 생리식염수관장. 에스에스관장	8,020	1	8,020	
처치재료 (18,000원)	파사렉트연고(렉토케어연고) 3g(대희제약)	6,000	1	6,000	3,100
	좌욕기	12,000	1	12,000	6,000

〈표 9. 원형봉합기를 이용한 치핵절제술 진료비 세부내역, 한사랑병원 제공〉

항목 들 중 순수재료대는 약제비, 재료비 등으로 구성될 것이고 진찰료, 입원료, 마취료, 수술비, 처치료 등은 행위료로 구분될 수 있을 것이다.

표 10에서 보는 것처럼 원형봉합기를 이용한 치핵절제술의 경우 순수재료비의 총합은 548,805원으로 계산되었고, 행위료 총합은 907,873원으로 계산되었다. 결국 원형봉합기를 이용한 치핵절제술의 원가는 순수재료대(548,805원)+행위료(907,873원)+미포함분(미계측)이 될 것이다. 적어도 수입총액이 원가 이상이 되어야 병원의 경영이 유지될 수 있다. 수입총액(1,622,730원)에서 순수재료대와 행위료의 총액(1,456,723원)을 뺀 값인 166,007원으로 미포함분에 해당하는 항목이 해결이 되어야 원가가 보장되었다라고 할 수 있을 것이다. 과연 166,007원으로 수술실관리, 소독, 기타 소모품 구입비, 기타 인력(행정, 원무, 심사, 관리 등)의 인건비, 금융비용, 홍보비 등을 해결할 수 있을 것인가?

치핵수술(원형봉합기이용)		
순수재료대		
	경구약	4,567
	연고	3,100
	주사제	26,484
	마취재료	55,484
	수술재료	431,910
	처치재료	9,100
	식재료	18,160
	총액	548,805
행위료		
	진찰료, 관리료	94,370
	입원료	203,820
	식대	31,350
	조제료	7,880
	주사수기료	14,790
	마취료	125,650
	수술비	411,723
	처치료	18,290
	총액	907,873
순수재료대 + 행위료 총액		1,456,723
미포함분		
	기타소모품	
	소독	
	수술실관리(전기, 환기 등)	
	감가상각	
	기타 인건비	
	금융비용	
	홍보	
수입 총액		1,622,730
요양급여(DRG)		1,148,900
환자본인부담금		473,830

〈표 10. 원형봉합기를 이용한 치핵절제술 진료비 세부내역 및 원가구성, 한사랑병원 제공〉

5. 제안

앞서 살펴본 것처럼 문제의 해결은 재정 투여에서부터 시작해야 한다는 것은 명확한 사실이다. 끊어지기 직전의 한국의료 특히 필수의료의 핵심인 외과를 살리기 위해서는 제도개선 뿐만 아니라 확실한 수가인상이 반드시 동반되어야 심폐소생이 될 수 있을 것이라 생각하며 다음을 제안하고자 한다.

1) 총점 고정 상대가치체계에서는 변화가 불가능에 가깝기 때문에 상대가치의 순증이 필요하다.

2) DRG 제도의 개선: 의사와 병원에 대한 보상 구분, 즉 병원보상 체계는 포괄수가로 하고 의사행위는 행위별수가로 별도보상하는 방안이 필요하다. 즉 현재 7개 질환군 포괄수가제도 신포괄수가제처럼 형식의 변화가 필요하다.

3) 수술수가인상: 우리나라와 구매력지수가 비슷한 일본 수준 정도는 인상되어야 할 것이다. 이는 수가 내에 포함되어 있는 진료비용의 현실적 인상, 위험도에 대한 보상수준 확대도 동반되어야 할 것이다.

4) 재료비: 현재의 100대 100 보상이 아닌 세금을 고려하여 110% 보상이 이루어져야 한다. 병원 입장에서는 매출로 잡히기 때문에 매출에 대한 세금을 추가로 납부하는 경우가 발생한다.

5) 기술발전, 숙련도에 따른 업무효율화, 수술시간 단축이 수술행위 총업무량 감소로 파악되어 점수가 오히려 삭감되는 경우도 발생한다. 업무효율화에 의한 비용감소분을 수가에 반영해야 할 것이다.

6) 인건비, 감가삼각비, 금융비용, 물가상승에 대한 상시적인 반영이 필요하다.

7) 외과전문의 가산을 증액(30% → 100%)하고, 지역가산 신설하여 필수의료, 지역의료 살리기에 노력해야 한다.

8) 외과의사라면 수술 전후 수술설명 및 동의서 작성, 수술 후 주의사항 등에 대해 환자 및 보호자에게 시간을 들여 설명하는 경우가 대부분이다. 따라서 이에 대한 가치부여가 필요하며 이는 '수술 전 의학관리료' 및 '수술 후 의학관리료' 신설이 필요하다.

9) 다빈도 비급여 재료나 응급수술(합병증에 따른 불가피한 수술)에 대해 별도 보상 확대가 이뤄져야 한다.

10) 표준화된 원가 계산 툴을 마련하여 전문가 단체와 상시적인 협의와 적극적인 반영이 필요하다.

11) 이상을 토대로 다음과 같이 치핵절제술 수가 인상을 제안한다.

치핵절제술 수가인상 제안			
구분	참고	인상률	증액분
수술비 인상	일본수가 참고	100%	300,000
재료비	재료비의 110% 인정	11.25%	63,000
외과전문의 가산	30% --> 100%	70%	200,000
수술전 상담료	일본수가 참고		100,000
수술후 관리료	일본수가 참고		100,000
수술기구 소독 수가	내시경 소독 수가 참고		14,000
증가총액			**777,000**

6. 마치며

외과의사, 즉 Surgeon의 어원은 '손으로 하는 일'이란 의미의 라틴어 'Chirurgiae'에서 왔다는 사실은 고대로부터 외과 영역이 전문가의 기술과 노동이 많은 역할을 하고 있다는 것을 의미한다. 과학과 기술이 발달함에 따라 기계, 장비, 인공지능이 인간의 역할을 대신하고 있고, 의학의 일부는 자본주의 시장경제에 속에서 상업화의 길을 걷고 있기도 하지만, 인간 고유의 속성인 노동, 특히 의학적 노동과 인류애를 바탕으로 한 의학에 대한 진심이 제대로 평가받기를 바란다. 그래야만 필수의료가 지속될 수 있을 것이며 외과도, 대장항문외과도 살 수 있는 것이다.

CURRICULUM VITAE

김태형

연세의대 용인세브란스병원 대장항문외과

Educations

1995-2001	연세대학교 원주의과대학(의학사)
2009.09-2019.02	연세대학교 대학원(석사: 외과학)
2019.09-2022.09	순천향대학교 대학원(박사과정 수료)

Board Certification/Licence

2001	의사면허 취득
2006	외과전문의 취득
2012	대장내시경 세부전문의 취득(인정의)
2017	대장항문외과 세부전문의 취득(인정의)

Brief Chronology of Employment

2001-2002	연세대학교 원주기독병원 : 인턴수료
2002-2006	연세대학교 원주기독병원 : 전공의수료(외과)
2009-2010	연세대학교 의과대학 외과학교실 전임의(대장항문) 수료
2010-2011	국립암센터 대장암센터 CAN(대장내시경아카데미) 수료
2016.03-2019.02	순천향대학교 부천병원 (외과 임상조교수)
2019.03-2019.08	순천향대학교 부천병원 (외과 임상부교수)
2019.09-2019.12	연세대학교 세브란스병원 외과 입원전담의
2020.01-2022.02	연세대학교 의과대학 입원의학과 임상부교수
2022.03-2024.02	연세대학교 의과대학 외과학교실 임상부교수
2024.03-	연세대학교 의과대학 외과학교실 임상교수

Societies

2006-present	대한외과학회 (평생회원)
2009-present	대한대장항문학회 (평생회원)
2010-present	대한내시경복강경외과학회 (평생회원)
2010-present	대한장연구학회 (평생회원)
2017-present	대한중환자외상학회 (정회원)
2021-present	한국외과로봇수술학회 (정회원)
2017-present	대한대장항문학회 건강보험위원회 간사
2018-present	대한외과학회 보험위원회 간사

Committee

2019-present	건강보험심사평가원 진료심사평가위원회 비상근심사위원
2019-present	보건복지부 전문평가위원회 위원
2019-present	건강보험심사평가원 약제급여평가위원회 위원
2021-present	보건복지부 적합성평가위원회 위원
2021-present	국가보훈처 보훈심사위원회 위원

Session 2

복부수술 정책가산 제안
- 복강경 수술 수가 및 림프절 절제술을 중심으로 –

김태형 (용인세브란스병원)

1980년대 군사정권하에서 전격도입된 전국민 건강보험적용 이후로 대한민국의 의료수가 중 외과의 주요 행위인 수술수가는 그동안 저평가된 상태에서 최소한의 수가상승만으로 버텨왔다. 이로 인해 외과전문의가 되고자 하는 의대졸업자는 꾸준히 감소하였고, 급기야 외과의 존립기반이 위협받을 정도로 신규배출되는 외과전문의 숫자는 줄어들어든 상태이다. 고질적이며 만성화된 외과의 저수가 문제를 해결하지 않고서는 더 이상 외과의 미래는 없음이 분명해지고 있다.

현재 외과에서 복부 장기에 대한 주요수술은 대부분 복강경 수술을 포함한 미세침습수술(Minimally Invasive Surgery: MIS)로 시행되고 있으며, 인구집단의 고령화로 인한 악성종양 환자수로 점점 더 늘어나는 추세이다. 이런 현실에서 복강경 수술 수가는 복강경치료재료수가의 인상과 복강경수술수가의 신설로 최근 소폭의 인상을 보였으나 아직도 원가대비 턱없이 낮은 수가를 보이고 있어 복강경 수술수가의 현실화가 시급한 상황이다.

또한 악성종양에서 시행되는 림프절절제술은 대장항문외과의 경우 복부내 원발부위에서 인접하지 않은 복부대동맥주위 림프절전이/측방골반내림프절전이에 대한 적절한 수가가 제시되지 못하고 있는 실정으로, 현재 활발히 해당 림프절절제술을 시행하고 있는 외과의사는 수가도 못받으면서 환자를 위해 서비스하는 모양으로 수술을 시행하고 있는 것이다. 또한 기존의 수술행위가 워낙 저평가되어 있어 재외국중 선진국에 해당하며 우리나라와 1인당 GDP가 비슷한 일본과 비교하여 약 1/4정도의 수가로 책정되어 있어 이에 대한 개선이 무엇보다 중요하다.

외과의 저수가를 개선하지 않고서는 정부가 주장하는 “필수의료 살리기”는 허공에 떠도는 메아리로 남을 것이며, 결국 “필수의료 붕괴”로 인해 재앙적 파국을 맞게 될 것이므로 이에 대한 최대한 빠르고 적극적인 해결이 요구된다.

복부수술 수가 개선 제안		
수술의 난도 반영	림프절 절제범위(악성종양)	
	수술범위(절제범위)	소장절제의 길이에 따른 구분
	장기 구분(장폐색증: 소장/대장 구분)	소장과 대장의 해부학적 차이고려
	재수술시 수가 반영	장유착이 심한 경우 수가가산
복강경수술 현실화	복강경수술의 난도 반영	Grading System

CURRICULUM VITAE

박지원
서울대학교병원

학력

1995-2001	서울대학교, 학사
2006-2008	충북대학교, 석사
2009-2019	충북대학교, 박사

경력

2001.03-2002.02	서울대학교병원, 인턴
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2008.03-2013.02	국립암센터 대장암센터 의사직
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2017.03-2022.08	서울대학교병원, 외과, 부교수
2019.07-2020.12	University of Pennsylvania, 방문교수
2022.09-present	서울대학교병원, 외과, 교수

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전문의 자격

외과 전문의, 2006
소화기내시경 세부전문의, 2007
대장항문 세부전문의, 2009
노인의학 지도전문의, 2020

Session 2

고난도 수술 수가 제안

박지원 (서울대학교병원)

진행성 대장암이나 재발성 대장암 등의 고난도 수술은 의료진의 높은 기술력과 경험이 요구되는 복잡한 절차로, 수술의 성공 여부는 환자의 생존율과 직결되는 중요한 요소이다. 그러나 현재 한국의 의료체계에서 고난도 대장암 수술에 대한 수가 체계는 여러 문제점을 안고 있다. 먼저, 고난도 수술의 복잡성을 충분히 반영하지 못한 수가 책정이 문제로 지적된다. 현재 수가 체계는 수술의 난이도나 수술 후 합병증 관리의 필요성을 충분히 고려하지 않고, 비교적 단순한 수술과 유사한 수준의 수가를 적용하는 경우가 많다. 이로 인해 의료진은 고도의 기술과 자원이 요구되는 수술을 수행하면서도 그에 상응하는 보상을 받지 못해, 의료기관의 운영에 부담을 주고 있다. 이러한 수가 체계는 의료진의 사기 저하와 의료서비스의 질적 저하로 이어질 수 있다. 수술의 난이도에 비해 낮은 수가가 책정되면, 의료진은 충분한 시간과 자원을 투입하기 어려워지고, 이는 수술의 성공률에 부정적인 영향을 미칠 수 있다. 결과적으로, 고난도 대장암 수술을 필요로 하는 환자들은 충분히 준비된 환경에서 수술을 받지 못할 위험이 있다.

이를 해결하기 위해서는 고난도 수술의 특성과 위험성을 충분히 반영한 수가 책정이 필요하다. 수술의 난이도, 수술 후 관리의 필요성, 의료진의 숙련도 등을 고려한 차별화된 수가 체계를 구축함으로써, 의료진이 최상의 조건에서 수술을 수행할 수 있도록 해야 한다. 또한, 고난도 수술을 위한 교육과 훈련을 강화하고, 이를 통해 의료진의 전문성을 높이는 것도 중요하다. 수가 체계의 개편을 통해 의료진이 환자의 안전과 치료의 질을 최우선으로 할 수 있는 환경을 조성해야 한다. 이를 위해 정부와 의료기관 간의 협력은 필수적이며, 수가 개편 과정에서 의료진의 의견을 반영하는 절차가 필요하다. 이러한 개선을 통해 고난도 대장암 수술의 성공률을 높이고, 환자들에게 더 나은 치료 결과를 제공할 수 있을 것이다.

따라서, 고난도 대장암 수술 수가 체계의 개편은 환자 안전을 보장하고, 의료서비스의 질을 향상시키기 위한 필수적인 과제로, 이를 통해 의료체계의 지속 가능한 발전을 도모할 수 있을 것이다.

CURRICULUM VITAE

Discussant

정성훈 과장

보건복지부 보험급여과

약력

전) 질병청 생물테러대응과장
신종감염병 대응과장
보건복지부 응급의료과장

현) 보건복지부 보험급여과장

CURRICULUM VITAE

Discussant

김지영 실장

건강보험심사평가원 공공수가정책실

약력

현) 건강보험심사평가원 공공수가정책실 실장

전) 건강보험심사평가원 급여전략부 부장

전) 건강보험심사평가원 병원지정부 부장

CURRICULUM VITAE

Discussant

신은숙 실장

심평원 포괄수가실

약력

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건강보험심사평가원 급여기준실 급여기준개선부 부장

CURRICULUM VITAE

Discussant

민태원

국민일보

약력

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CURRICULUM VITAE

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이진한

동아일보

학력

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2009.02	차의과학대학교 통합의학과 석사
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경력

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2001.03-현재	동아일보 의학전문기자
2001.02	서울대병원 인턴
2023.04	보건의 날 대통령표창
2021.05~현재	한국의학바이오기자협회 부회장
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2019.04~현재	노인의료나눔재단 홍보대사
2019.12	응급의료 보건복지부 장관상
2018.07~2020.07	한국보건의료연구원 비상임이사
2017.10	정신건강 보건복지부 장관상
2014.11-2018.10	한국건강관리협회 건강증진 전문위원
2011.10-2015.09	건강보험심사평가원 미래전략위원회 위원

CURRICULUM VITAE

Discussant

서정윤

매경헬스

약력

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Room 2

[Proctology Study Group]
All about the Hemorrhoids

Chairs

Do Yeon HWANG Seoul Songdo Hospital, Korea
Paul SELVINDOSS Gleneagles Hospital, Malaysia

Pradeep P. SHARMA
Jehangir Hospital and Research Centre, Pune, India

Other Experience & Professional Memberships

2023-2025 PRESIDENT: Association of Colon & Rectal surgeons of India (ACRSI)
Professor: MUHS fellowship in Minimal access surgery & coloproctology.
Chief Editor & Author: ACRSI Textbook of Colorectal Surgery,
Founder: FB group Learning Colorectal Surgery (LCS)

29 Publications,
7 Clinical Trials,
5 Chapters in Textbook,
6 Video chapters,
1 Video book,
5 Orations,
208 Podium presentations

Jeehye LEE
Yonsei University, Korea

Education

Bachelor of Medicine, Chung-Ang University, Seoul, Republic of Korea
Master of Science in Medicine, Seoul National University, Seoul, Republic of Korea

Professional Experience

Internship, Severance Hospital, Seoul, Republic of Korea

Resident, Surgery, Seoul National University Bundang Hospital, Gyeonggi-do, Republic of Korea

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Hemorrhoidectomy using Advanved Energy Device

Jeehye LEE

Yonsei University, Korea

Hemorrhoidectomy, a surgical intervention for symptomatic hemorrhoids, has been significantly enhanced by advanced energy devices such as the Harmonic Scalpel and LigaSure. These devices utilize ultrasonic and bipolar energy to cut and coagulate tissues simultaneously, offering distinct advantages over conventional hemorrhoidectomy techniques. This review aims to evaluate the efficacy and clinical benefits of advanced energy devices in hemorrhoidectomy, comparing them with traditional surgical methods.

Advanced energy devices reduce intraoperative blood loss, operative time, and postoperative pain, resulting in shorter recovery periods and improved patient satisfaction. The Harmonic Scalpel employs ultrasonic vibrations for precise dissection and coagulation with minimal thermal spread, reducing tissue damage and associated complications. LigaSure, a bipolar energy device, ensures effective vessel sealing with controlled thermal impact, enhancing hemostasis and reducing the need for additional sutures. Comparative studies have demonstrated that these devices result in significantly fewer postoperative complications, such as wound infections and delayed healing, compared to traditional techniques.

The overall clinical benefits of advanced energy devices—reduced postoperative morbidity, lower analgesic requirements, and enhanced recovery profiles—suggest they could redefine the standard of care in hemorrhoidal surgery.

Sungyup JOUNG
Daehang Hospital, Korea

Education

2000-2006 Korea University Medical College
2006-2007 Korea University Anam Hospital : Internship course
2007-2011 Korea University Ansan Hospital : GS resident course

Professional Experience

2011-2014 Korea University Ansan Hospital : Colorectal fellowship
2014-2017 Korea University Guro Hospital : Colorectal fellowship
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Professional Experience

Clinical Assistant Professor, Colorectal surgery, Seoul St. Mary's Hospital,
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Societies Member

The Society of American Gastrointestinal and Endoscopic Surgeons(SAGES)
The Korean Society of Coloproctology
The Korean Society of Hernia
The Korean Society of Geriatric surgery
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Clinical effect of multimodal pain management for hemorrhoidectomy

Chul Seung LEE

Hansol Hospital, Korea

In postoperative multimodal analgesia, pain management options can be broadly classified into opioid and non-opioid agents. While opioids are highly effective in reducing pain, their use is associated with various complications such as nausea, vomiting, decreased gastrointestinal function, and urinary retention, all of which contradict the principles of Enhanced Recovery After Surgery (ERAS). To minimize opioid use and effectively manage pain, a multimodal approach to pain management is essential.

In 2017, the PROSPECT (PROcedure-SPECific post-operative pain managemenT) Working Group proposed various pain management strategies for hemorrhoidal surgery, including the newly recommended pudendal nerve block for all patients undergoing this procedure. Intraoperatively, a combination of analgesics such as paracetamol, NSAIDs, and opioids is recommended. Postoperatively, topical lignocaine, glyceryl trinitrate, laxatives, and oral metronidazole are advised.

The concept of multimodal pain management involves using multiple medications with different mechanisms of action to reduce postoperative pain. By targeting both central and peripheral pain pathways, this approach allows for synergistic and additive effects, leading to more effective pain relief. With the advancement of multimodal pain management (MMP), there has been growing interest in same-day ambulatory surgery for anorectal procedures.

The pudendal nerve, originating from the sacral plexus (S2, S3, and S4), provides sensory and motor innervation to the anal canal and lower rectum. It travels along the medial side of the ischial tuberosity within the interligamentous plane, accompanied by the internal pudendal artery. Ropivacaine, known for its lower cardiotoxicity compared to bupivacaine, is effective for postoperative pain when used in this context.

Accurately administering a pudendal nerve block without a nerve stimulator is challenging. Recent studies emphasize the importance of ultrasound guidance in improving the accuracy and effectiveness of this block. Ultrasound allows precise identification of the interligamentous plane, located between the sacrotuberous and sacrospinous ligaments, facilitating the correct injection of long-acting ropivacaine.

The multimodal pain protocol, which includes perioperative multimodal analgesia and intraoperative ultrasound-guided pudendal nerve block (PNB), has demonstrated an opioid-sparing effect without complications or adverse effects. This protocol reduces opioid consumption postoperatively and enhances early recovery. Therefore, ultrasound-guided PNB performed by the surgeon is likely to improve recovery outcomes for patients undergoing hemorrhoid surgery.

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Education

2005-2011 Hanyang University College of Medicine

Professional Experience

2011-2012 Internship, Yonsei University College of Medicine, Severance Hospital
2012-2016 Resident training, Department of Surgery,
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2016-2017 Fellowship, Division of Colorectal Surgery, Department of Surgery,
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2018-2021 Assistant Professor, Division of Colorectal Surgery,
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2021-2022 Medical Advisor, AstraZeneca Korea
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Room 3

[Laparoscopic Colorectal Surgery Study Group]
The Best Approach for the Patients with Very Low Rectal Cancer

Chairs

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MD Anderson Cancer Center, USA

Jin KIM

Korea University, Korea

Yoon Suk LEE
The Catholic University of Korea, Korea

Education

2001 Board of Surgery, Korea
2009 Ph.D, College of Medicine, The Catholic University of Korea

Professional Experience

2009-2010 Research fellow, Cleveland Clinic in Florida

Takeru MATSUDA
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Education

1989-1995 Kobe University, School of Medicine, Kobe, Japan
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1999-2002 Kobe University, Graduate School of Medical Science
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Professional Experience

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2004-2007 Medical staff, Department of Surgery, Seirei Mikatahara General Hospital
2007-2010 Chief, Department of Surgery, Kobe Kaisei Hospital
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2013-2017 Chief, Department of Surgery,
National Hospital Organization Kobe Medical Center
2017-2018 Assistant professor, Division of Gasrointestinal Surgery,
Department of Surgery, Kobe University Graduate School of Medicine
2018-present Associate professor, Division of Minimally Invasive Surgery,
Department of Surgery, Kobe University Graduate School of Medicine

Transanal TME (taTME)

Takeru MATSUDA

Kobe University, Japan

Since transanal total mesorectal excision (TaTME) was first introduced for rectal cancer by Sylla and Lacy in 2010, it has been employed worldwide by an increasing number of colorectal surgeons. Because it provides a better view of the surgical planes and a delicate forceps maneuver in the narrow pelvis, it is expected as a promising approach especially for low rectal cancer. We have employed TaTME for all cases with low rectal cancer since 2016. Although several concerns regarding oncological safety and technical difficulty have been raised in Norway and the Netherlands, it has been safely introduced and performed in Japan. Severe intraoperative complications including urethral injury are rare, and the oncological outcomes are acceptable. Furthermore, TaTME has been more indicated for intersphincteric resection (ISR) and abdominoperineal resection (APR) than low anterior resection in Japan.

In this presentation, we show our procedures of TaTME for very low rectal cancer including ISR and APR. We also demonstrate the superiority of TaTME compared with the conventional approaches.

Gyoung Tae NOH

Ewha Womans University College of Medicine, Korea

Education

2000-2006 M.D., Chosun University College of Medicine, Gwang-ju, Korea
2011-2015 M.S., Korea University Postgraduate School, Seoul, Korea
2016-2021 Ph.D., Yonsei University Postgraduate School, Seoul, Korea

Professional Experience

2006-2007 Internship, Mokdong Hospital,
Ewha Womans University College of Medicine
2007-2011 Residency, Department of Surgery, Mokdong Hospital,
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2011-2012 Fellow, Division of Colorectal Surgery, Department of Surgery,
Ewha Womans University School of Medicine
2015-2017 Fellow, Division of Colorectal Surgery, Department of Surgery,
Severance Hospital, Yonsei University
2017-2021 Clinical assistant professor, Division of Colorectal Surgery,
Department of Surgery, Ewha Womans University College of Medicine
2021-present Assistant professor, Division of Colorectal Surgery,
Department of Surgery, Ewha Womans University College of Medicine

Robotic TME

Gyoung Tae NOH

Ewha Womans University College of Medicine, Korea

This presentation focuses on the emerging role of robotic surgery in the management of very low rectal cancer, a challenging area where traditional surgical approaches often face limitations. Robotic surgery, particularly robotic total mesorectal excision (TME), has shown promise in improving surgical outcomes for very low rectal cancer by providing superior visualization, precision, and dexterity in confined pelvic spaces. These advantages are crucial in preserving vital nerve structures, reducing the risk of postoperative complications such as urinary and sexual dysfunction, and achieving clear surgical margins. Despite these benefits, the application of robotic surgery in very low rectal cancer is not without challenges. The steep learning curve, extended operative times, and higher costs associated with robotic techniques pose significant barriers to their widespread adoption. This presentation will review the current evidence supporting the use of robotic surgery in very low rectal cancer, discuss its potential to enhance patient outcomes, and explore the future integration of advanced technologies.

Rakesh Kumar GUPTA
B.P.Koirala Institute of Health Science, Nepal

Education

Prof. Gupta completed his undergraduate and postgraduate medical school in BPKIHS University. He then completed fellowship training, in colorectal Surgery at Vilnius university oncology institute (VOIU) at Vilnius, colorectal division Mayo clinic, Rochester, USA, MIS & Abdominal Wall Reconstruction at National university hospital Singapore.

Currently working as unit chief, the MIS & General Surgery at BPKIHS.

Professional Experience

He is founding member and president of Nepal Hernia Society (NHS), Board of governor Endoscopic and Laparoscopic Surgeon of Asia (ELSA) and Asia Pacific Hernia Society (APHS). He has more than 50 publications in international peer-reviewed surgical journals. He serves as member editorial board of World Journal of Surgical Procedures.

Joaquim Manuel da Costa PEREIRA

Hospital de Braga, Portugal

Education

1986	Medical School: Oporto Faculty of Medicine, Oporto University, graduation
1987	Post-grad on Hidrology and Climatology
1994	Post-grad on Coloproctology: St. Mark's Hospital, London
2003	Master on Public Health, with specialization on Epidemiology: Value of carcinoembrionic antigen as a method of recurrence detection on colorectal cancer. Oporto University

Professional Experience

1989-1996	Residence on General Surgery on central and Universitary Hospital S: João, Oporto
1992-2004	Assistant on teaching Clinical Surgery, at Oporto University, Oporto Faculty of Medicine
1997-2005	Specialist General Surgeon (Assistente Hospitalar) positions on Hospital S. João, Hospital Macedo de Cavaleiros and Hospital de Mirandela- Portugal
2005-2015	Consultant Surgeon (Assistente Hospitalar Graduado) on Hospital Mirandela and Hospital Centro Hospitalar Tâmega e Sousa - Portugal
2015	Chief of Service (Assistente Graduado Sénior) Hospital Centro Hospitalar Tâmega e Sousa - Portugal
2009-2017	Director of Colorectal Unity: at Centro Hospitalar do Tâmega e Sousa (CHTS)
2010-2017	Chief of emergency department team
2017-2018	Director of Colorectal Unity: at Centro Hospitalar de entre Douro e Vouga (CHedv)
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Professional Experience

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KOR Room 4

[KSCP] [Editorial Committee] Becoming a High Impact Journal in Colorectal Surgery

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2004 – 2006	Ph. D., Medicine -Ulsan Medical College Graduate School, Seoul, Korea

Professional Experience

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2010 – 2012	Clinical researcher, Department of Surgical Oncology, The University of Texas MD Anderson Cancer Center, TX, USA
2012 – 2015	Clinical assistant professor, Department of Colorectal Surgery, Asan Medical Center
2015 – 2021	Associate professor, Department of Colorectal Surgery, Asan Medical Center
2021 – present	Professor, Department of Colorectal Surgery, Asan Medical Center

Annals of Coloproctology: Past, Present and Future

In Ja PARK

Ulsan University, Asan Medical Center, Korea

Ultimately, the goal of Annals of Coloproctology (Ann Coloproctol, ACP) is to become a beloved academic journal that not only contributes to the overall advancement of colorectal disease treatment but also serves as a platform for scholarly discussion by promptly publishing high-quality or currently trending topics. We view being indexed in SCIE as one step in the process toward this ultimate objective. However, given the current situation of the medical society, especially in Korea, the reality is that only by being indexed in SCIE can we attract sufficient submissions and ensure the smooth operation of the journal. As a result, our current efforts are overly focused on achieving SCIE indexing.

ACP is taking significant steps toward this goal by implementing both external and internal changes. These changes include updating the journal's logo, modernizing the publication format, enhancing promotional strategies, and diversifying the forms of publications. Through these efforts, we aim to create a journal that is even more impactful and closer to achieving our mission.

To achieve improvement of journal quality, citation matrix, and advertisement of ACP, devotion of editorial members is critical. Recently, the Editorial Board was divided into four Task Force (TF) teams: Graphic Abstract Team, Citation Index Strategy Team, Promotion Team, and Article Topic Planning Team. Each TF team played a vital role in enhancing the journal's status and establishing it as an internationally recognized publication in the field of Colorectal Surgery. Particularly in the past three years, we have focused on publishing planned articles to increase the journal's impact factor and have restructured our journal editing and submission systems with the goal of becoming an SCIE journal. In addition, ACP have changed publication systems to keep up with fast changing medical publication circumstances.

As a result, in 2023 JCR report, ACP received the first JIF as 3.0. Notably, ACP ranked 47th out of 290 journals (Q1) in the surgery category.

Although ACP still e tirelessly, contemplating the journal's growth and striving to overcome challenges. However, despite these achievements, ACP is currently facing challenges. We are dealing with a decrease in submissions, a shortage of reviewers, and the burden of financial dependency on the society. To overcome these difficulties, sharing ideas among domestic journals and benchmarking the strengths of each journal could help domestic journals secure an important position on the international stage.

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Seoul National University Hospital, Korea

Education

1992 - 1998 M.D., Seoul National University College of Medicine

2001 - 2008 Doctor of Medical Science (Ph.D.), Graduate School of Seoul National University

Professional Experience

1998 - 2003 Internship and Residency, Seoul National University Hospital

2006 - 2007 Fellowship, Seoul National University Hospital

2007 - 2008 Fellowship, Seoul National University Bundang Hospital

2018 - present Clinical Professor, Department of Surgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital

2018 - present Member, National Cancer Control Planning Board

2022 - present Editor-in-Chief, Publication & Editorial Service Committee, The Korean Surgical Society

Sun Jin PARK

Kyung Hee University, Korea

Education

1998	M.D. degree from Kyung Hee University College of Medicine, Seoul, Korea
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2010	Ph.D. degree from Kyung Hee University, Graduate School, Seoul, Korea

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2003-2006	Military Service (Public Health Service)
2006-2009	Fellow and Clinical Assistant Professor, Kyung Hee University Hospital
2010-2015	Assistant Professor, Department of Surgery, Kyung Hee University Hospital
2015-2020	Associate Professor, Department of Surgery, Kyung Hee University Hospital
2020-	Professor, Department of Surgery, Kyung Hee University Hospital

JMIS

Sun Jin PARK

Kyung Hee University, Korea

The Journal of Minimally Invasive Surgery (J Minim Invasive Surg; JMIS), the official journal of The Korean Society of Endo-Laparoscopic & Robotic Surgery, is a peer-reviewed and open access journal. JMIS is published quarterly (15th day of March, June, September, and December) each year.

It aims to provide surgeons with the latest and advanced information on practice and research in minimally invasive surgery.

Its scope includes laparoscopy, endoscopy, robotics, minimally invasive surgery, and newly emerging surgical technologies and techniques in the field of general surgery. Medical therapy, radiotherapy, and basic research manuscripts can be considered if they display a clear interaction with one of the fields above or assist the surgeon in optimizing patient care. Its regional scope is mainly Korea, but it welcomes submission from researchers all over the world.

The journal was initially launched as Daehan Naesigyeong Bokganggyeong Hakhoeji (which means the Journal of The Korean Society of Endo-Laparoscopic & Robotic Surgery) in November 1998 as a biannual journal (ISSN 1738-7884 from 2005). In 2012, the journal was renamed the Journal of Minimally Invasive Surgery (ISSN 2234-778X) to enhance its global recognition. Now, all or part of this journal is indexed, tracked, or covered by PubMed Central (PMC), KoreaMed, KCI, CrossRef, Science Central, and Google Scholar.

JMIS specializes in minimally invasive surgery and is one of the few in Asia to regularly publish video articles, a rapidly growing and crucial aspect of modern surgical education and practice. This specialization sets us apart and adds unique value to the field.

JMIS has embraced its regional identity, with a primary focus on Korea. However, in line with our revised aims and scope, we continue to welcome and encourage submissions from researchers globally. This approach has yielded a significant increase in international participation: from 2019 to 2023, the percentage of international authors has risen from 2.7% to 40.5%. Our scope, while rooted in Korea, encompasses a wide array of topics in minimally invasive surgery, endoscopy, and robotics, reflecting both regional expertise and global relevance. Building upon our commitment to both regional focus and international inclusion, JMIS plans to continue enhancing its global reach and impact. Recognizing our strong foundation in Korean minimally invasive surgery, we aim to serve as a bridge that connects Korean advancements in this field with the global surgical community. This balanced focus ensures JMIS remains a vital resource for surgeons in Korea and an appealing platform for international contributors.

Hyuk HUR
Yonsei University, Korea

Education

1992 - 1995	Premedical Course, College of Liberal Arts and Science, Yonsei University, Seoul, Korea
1995 - 1999	M.D. College of Medicine, Yonsei University, Seoul, Korea
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Professional Experience

2000 – 2004	Residency: Department of Surgery, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea
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2015 – 2023	Associate Professor, Division of Colon & Rectal Surgery, Department of Surgery, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea
2023 – Present	Professor, Division of Colon & Rectal Surgery, Department of Surgery, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

KJCO

Hyuk HUR

Yonsei University, Korea

The Korean Journal of Clinical Oncology (Koran J Clin Oncol, KJCO) is an official publication of the Korean Society of Surgical Oncology. KJCO serves its readers as the single most credible, authoritative resource for disseminating significant clinical oncology research. This journal aims to extend the lifespan and improve the quality of life for cancer patients through comprehensive research, not only focused on cancer treatment but also covering a broad range of cancer-related studies. Its scope includes a wide range of tumors, such as gastrointestinal, breast, head and neck cancers, soft tissue tumors, and tumors of other organs.

To this end, KJCO welcomes submissions across a broad spectrum of topics within clinical oncology, including but not limited to:
Cancer genetics and genomics
Cancer metabolism and molecular oncology
Cellular and immuno-oncology
Epidemiology and cancer prevention
Surgical oncology
Radiotherapy and chemotherapy
Palliative care and survivorship: supportive care and quality of life issues
Precision medicine
Clinical trials and novel therapeutic approaches
Artificial Intelligence and Machine Learning in Oncology

The journal publishes original articles, reviews, case reports, correspondences, editorials. It is published biannually, in June and December, and is distributed to members of the Korean Society of Surgical Oncology, medical schools, libraries, and related institutes to advance academic knowledge in clinical oncology and promote active communication between members and international societies of clinical oncology.

We invite researchers and clinicians to submit their latest findings and perspectives, contributing to a vibrant, interdisciplinary dialogue that will shape the future of clinical oncology.

Room 1

[Colorectal Cancer Study Group] Evolving Treatment Strategies of Locally Advanced Rectal Cancer

Chairs

Seung-Yong JEONG

Seoul National University Hospital, Korea

Kil Yeon LEE

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Education

2001- 2003 Graduated from Premedical School, Seoul National University, College of Natural Science, Seoul, Korea
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Professional Experience

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Professional Experience

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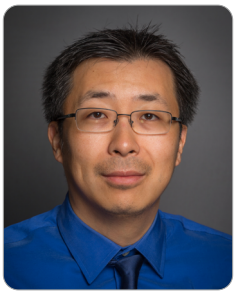
2015-	Associate Director, Colorectal Surgery Fellowship Program, Mount Sinai Hospital, New York, NY
2017-2021	Associate Professor of Surgery, Department of Surgery, Division of Colorectal Surgery, Mount Sinai Hospital, New York, NY



Richard KIM

Moffitt Cancer Center, USA

Education

1993-1995	BS/MD Honors Medical Program. BS Biology. University of Miami. Miami, Florida (six-year program)
2000-2001	Internship. Internal Medicine. New York University Downtown Hospital. New York
2001-2003	Residency. Internal Medicine. Board Certified in Internal Medicine. University of Illinois at Chicago. Chicago, Illinois
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Conflict of Interest (COI) Disclosure

Name of Author : Richard Kim

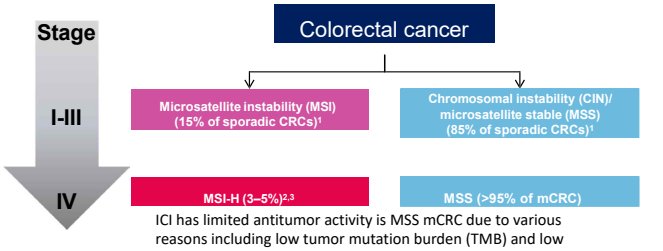
I currently have, or I have had in the past 2 years, an affiliation or financial interest with business corporation(s):

(1) Consulting fees, patent royalties, licensing fees : Taiho, Bayer, Exelixis, Eisai, Roche, Ipsen, Abbvie , Servier , Astra Zeneca, Incyte

(2) Research fundings : none

(3) Others : No

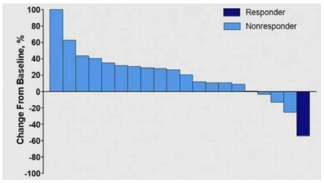
Background



ICI has limited antitumor activity is MSS mCRC due to various reasons including low tumor mutation burden (TMB) and low immune infiltration.

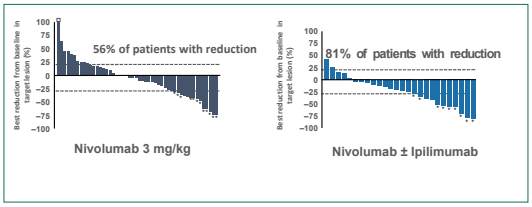
1. Grady and Markowitz. Dig Dis Sci 2015; 2. Koopman et al. Br J Cancer 20093. Fujiyoshi et al. Anticancer Res 2017
3. Llosa NJ, et al. Cancer Discov. 2015;5(1):43-51.

Anti-PD1/PDL1 trials in MSS VS MSI-H CRC



KEYNOTE-028
(PDL-1+ CRC)

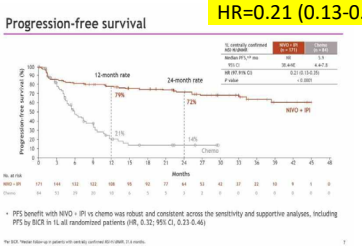
Nivolumab ± ipilimumab
(CheckMate-142, phase II)



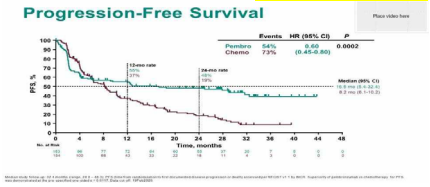
References: 1. O'Neil et al. ESMO 2015.
2. Overman MJ, et al. J Clin Oncol. 2016;34(15_suppl):3501

Checkmate 8HW (left) vs. Keynote-177 (right)

HR=0.21 (0.13-0.35)



HR=0.6 (0.45-0.80



How can we overcome the mechanism of Primary Resistance in pMMR/non-MSI-H CRC

Barriers

- Low Tumor Mutation Burden and Lack of Tumor Antigen.
- VEGF-driven Immunosuppressive TME.
- Immune Tolerance by Liver Metastasis ie. activation of CD8+ T cells and poor CD4+ T cells within the liver may lead to exhaustion or premature death of T cells / lack of dendritic cells.

Goal

- Combine PD-1 blockade with other therapeutic approaches aimed at increasing the immunogenicity of CRC tumors and/or modifying the immunosuppressive TME.
- Novel immunotherapeutics (bispecifics, modified checkpoint inhibitors)
- Local induction of inflammatory response (STING, XRT, etc)

1. Kim CW te al Cancers (Basel). 2021 Sep 29;13(19):4906

Rationale for a Combination of Anti–PD-1 Agent and Chemotherapy[1]

- **Reduces tumor bulk—improves T cell:tumor target ratio**
- Eradicates immune suppressive cells or reduces T-cell inhibitory substances produced by tumor
- Improves T-cell penetration
- Induces immunologic cell death that increases their recognition by T cells and APC

1. Huang AC et al. *Nature*. 2017;545:60-65.

Clinical trials investigating ICI + Anti VEGF and chemotherapy combination in MSS CRC						
Phase, Drug, line	**Size, MSI status**	**ORR**	**DCR**	**PFS**	**OS**	**Author, NCT**
KEYNOTE 651 FOLFOX + pembrolizumab (arm B) FOLFOX + pembrolizumab + binimetinib (arm C) FOLFIRI + pembrolizumab (arm D) FOLFIRI + pembrolizumab+ binimetinib (arm E)	31 pts in arm B (0% were MSI-H) 11 pts in arm C (0% were MSI-H) 32 pts in arm D (0% were MSI-H) 20 pts in arm D (0% were MSI-H)	61% 9% 25% 15%	94% 100% 63% 63%	8.6 mo 12.0 mo 8.3 mo 6.0 mo	28.6 mo N/A 25.1mo N/A	R.Kim et al. NCT03374254.
Phase II (AtezoTRIBE), FOLFOXIRI + Bev (arm A) vs Atezo +FOLFOXIRI + Bev (arm B) as First line	73 pts in arm A (7% were MSI-H) 145 pts in arm B (6% were MSI-H)	64% 59% (*P*= .412)	N/A	11.5 mo 13.1 mo (HR 0.69; 0.56-0.85; *P*= .012) In MSS subgroup, 11.4 mo vs 12.9 mo (*P*= .071)	N/A	Cremolini et al. NCT03721653
Phase II (BACCI), Atezo + Bev + Capecitabine (arm 1) vs Bev + Capecitabine (arm 2) as second or later line	82 pts in arm 1 (84% MSS, 11% MSI-H, 5% Unknown) 46 pts in arm 2 (89% MSS, 9% MSI-H, 2% Unknown)	8.5% 4.4 % (*P* = .37)	N/A	4.4 mo 3.6 mo (p= .07 was statistically significant and lower than the α value of .10 prespecified in the statistical design)	10.3 mo 10.2 mo (HR, 0.96; 0.63-1.45; *P*= .42) MSS subgroup OS N/A	Mettu et al. NCT02873195
Phase II (CheckMate 9x8), Nivo + mFOLFOX6 + Bev (arm A) vs mFOLFOX6 + Bev (arm B) as First line	127 pts in arm A 68 pts in arm B MSI status N/A	60% 46% *P*-value N/A	91% 84% *P*-value N/A	11.9 mo 11.9 mo (HR, 0.81; 0.53-1.23; *P*= .30)	29.2 mo Not Reached *P*-value N/A	Lenz et al. NCT03414983

Abbreviation: Atezo, Atezolizumab; Bev, Bevacizumab; Cap, Capecitabine; CRC, Colorectal cancer; DCR, Disease control rate; Mo, Months; MSI-H, Microsatellite instability-high; MSS, Microsatellite stable; Nivo, Nivolumab; N/A, Not available; ORR, Overall response rate; OS, Overall survival; PFS, Progression-free survival; Pts, Patients.

Rationale for ICI + TKI in CRC with MSS

- MSS colorectal cancer tumor microenvironment hosts more tumor-associated macrophages (TAMs)[1].
- TAMs have been reported to have several protumoral functions, including promotion of angiogenesis and suppression of adaptive immunity[2].
- Tyrosine kinase inhibitors, particularly angiogenesis inhibitors, may decrease TAMs and enhance T cell infiltration and activation along with anti-angiogenesis effect[3,4].
- Multikinase inhibitors may promote DC maturation, T cell priming, activation and differentiation into long-lived memory T cells by increasing tumor antigenicity and tumor immunogenicity[3,4].
- This approach has been successful in certain solid tumors, including endometrial and renal cell carcinoma.

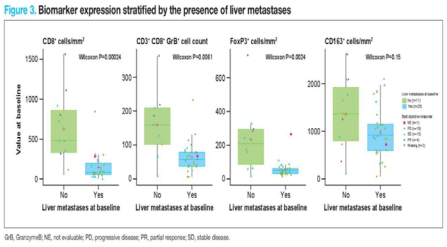
1. Kang JC et al. Journal of surgical oncology 102:242-249, 2010
2. Allavena P et al. Critical reviews in oncology/hematology 66:1-9, 2008
3. Hoff S et al. Annals of Oncology 28:v423, 2017
4. Chen C-W et al. International Liver Congress. J Hepatol 70:e605-e606, 2019

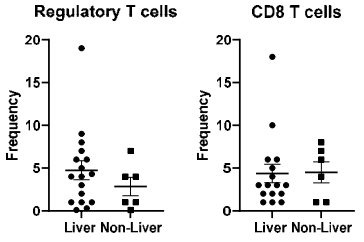
Clinical trials investigating ICIs and TKIs combination in MSS CRC						
Phase, Drug	**Size, MSI status**	**ORR**	**DCR**	**PFS**	**OS**	**Autor, NCT**
Phase Ib (REGONIVO), Nivolumab + Regorafenib	25 pts (96% MSS, 4% MSI-H)	36% ORR in MSS subgroup: 33%	N/A	7.9 mo	Not reached	Fukuoka et al. NCT03406871[1]
Phase Ib, Nivolumab + Regorafenib	52 pts (100% MSS) (40 pts were evaluable for efficacy)	8%	63%	4.3 mo	11.1 mo	R. Kim et al. NCT03712943[2]
Phase II, Nivolumab + Regorafenib	70 pts (100% MSS)	7%	39%	1.8 mo	12.0 mo	Fakih et al. NCT04126733[3]
Phase I/II, Pembrolizumab + Regorafenib	73 pts (100% MSS)	0%	49%	2.0 mo	10.9 mo	Barzi et al. NCT03657641[4]
Phase II (REGOMUNE), Avelumab + Regorafenib	48 pts (100% MSS) (43 pts were evaluable for efficacy)	0%	54%	3.6 mo	10.8 mo	Cousin et al. NCT03475953[5]
Phase II (CAMILLA), Durvalumab + Cabozantinib	36 pts in CRC cohort (100% MSS) (29 pts were evaluable for efficacy)	28%	86%	4.4 mo	9.1 mo	Saeed et al. NCT03539822[6]
Phase II (LEAP -005), Pembrolizumab + Lenvatinib	32 pts in CRC cohort (100% MSS)	22%	47%	2.3 mo	7.5 mo	Gomez-Roca et al. NCT03797326[7]

Abbreviation: CRC, Colorectal cancer; DCR, Disease control rate; Mo, Months; MSI-H, Microsatellite instability-high; MSS, Microsatellite stable; ORR, Overall response rate; OS, Overall survival; PFS, Progression-free survival; Pts, Patients; TKI, tyrosine kinase inhibitor.

1. Fukuoka S et al. J Clin Oncol. 38:2053-2061, 2020.
2. Kim R et al. ESOC 2022 in press.
3. Fakih M et al. J Clin Oncol. 2021;39(15_suppl):3540-3540.
4. Barzi A et al. J Clin Oncol. 2022;40(4_suppl):91-91.
5. Cousin S et al. Clin Cancer Res. 27:2139-2147, 2021.
6. Saeed A et al. J Clin Oncol. 2022;40(4_suppl):535-535.
7. Gomez-Roca C et al. J Clin Oncol. 2021 2021;39(3_suppl):94-94.

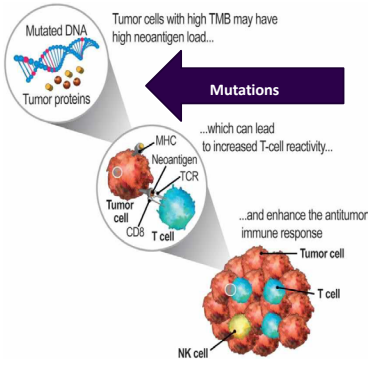
Biomarkers

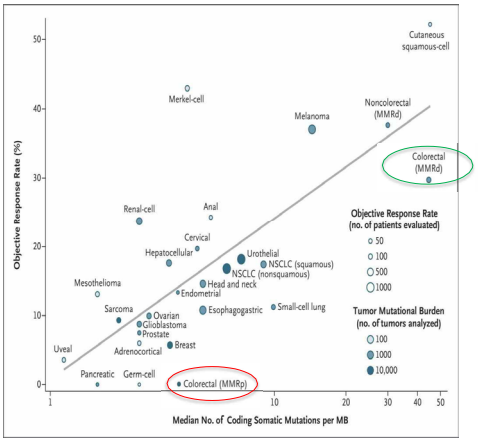




1. Fakih M et al. J Clin Oncol. 2022 40:4_suppl, 89-89
2. Kim R et al. EJOC 2022 i

TMB and Immune Response





Stenzinger et al. Genes Chromosomes and Cancer 2019; Yarchaon NEJM 2017

High TMB as a Marker for Response in MSS CRC?

Table 58: Efficacy Results for Patients with TMB-H Cancer in KEYNOTE-158

Endpoint	KEYTRUDA 200 mg every 3 weeks	
	TMB ≥10 mut/Mb n=102*	TMB ≥13 mut/Mb n=70
Objective Response Rate		
ORR (95% CI)	29% (21, 39)	37% (26, 50)
Complete response rate	4%	3%
Partial response rate	25%	34%
Duration of Response	n=30	n=26
Median in months (range)†	NR (2.2+, 34.8+)	NR (2.2+, 34.8+)
% with duration ≥12 months	57%	58%
% with duration ≥24 months	50%	50%

Table 59: Response by Tumor Type (TMB ≥10 mut/Mb)

	N	Objective Response Rate n (%)	95% CI	Duration of Response range (months)
Overall*	102	30 (29%)	(21%, 39%)	(2.2+, 34.8+)
Small cell lung cancer	34	10 (29%)	(15%, 47%)	(4.1, 32.5+)
Cervical cancer	16	5 (31%)	(11%, 59%)	(3.7+, 34.8+)
Endometrial cancer	15	7 (47%)	(21%, 73%)	(8.4+, 33.9+)
Anal cancer	14	1 (7%)	(0.2%, 34%)	18.8+
Vulvar cancer	12	2 (17%)	(2%, 48%)	(8.8, 11.0)
Neuroendocrine cancer	5	2 (40%)	(5%, 85%)	(2.2+, 32.6+)
Salivary cancer	3	PR, SD, PD		31.3‡
Thyroid cancer	2	CR, CR		(8.2, 33.2+)
Mesothelioma cancer	1	PD		

FDA Approved 6/16/2020

Tumor Mutational Burden-High (TMB-H) Cancer

- for the treatment of adult and pediatric patients with unresectable or metastatic tumor mutational burden-high (TMB-H) [≥10 mutations/megabase (mut/Mb)] solid tumors, as determined by an FDA-approved test, that have progressed following prior treatment and who have no satisfactory alternative treatment options.[1] (1.16, 2.1)

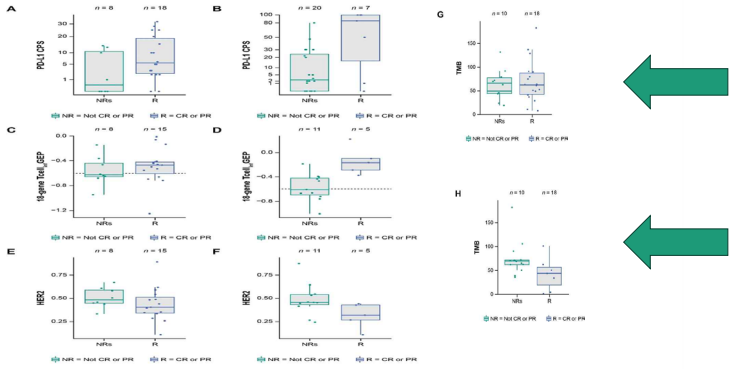
TAPUR: Pembrolizumab in high TMB (≥9) CRC

Number of pts	27
Median Age, yrs	59 (34-79)
≥3 Prior systemic regimens, %	78
DC rate, % (OR SD16+) (90% CI)	28 (16, 45)
OR rate, % (95%)	4 (0, 19)
Median PFS, wks (95% CI)	9.3 (7.3, 16.1)
1 year OS, % (95% CI)	45.6 (22.2,66.3)

HTMB ranged from 9 to 54 Muts/Mb

Fabrizio J of Gastro Onc 2018; Chen ASCO 2019; Meriri et al. GI ASCO 2020 a133

PD-L1 CPS by response for (A) cohort B and (B) cohort D; $T_{cell_{int}}$GEP signature **by** response for (C) cohort B and (D) cohort D; HER2 single gene expression by response for (E) cohort B and (F) cohort D; and TMB by response for (G) cohort B and (H) cohort D



Kim R et al Clinical Colorectal Cancer 2024

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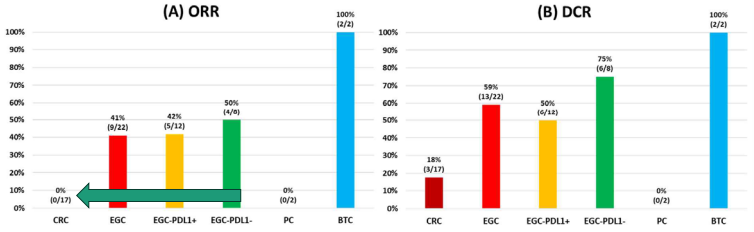
Tumor Mutational Burden Alone Is Not a Good Predictive Biomarker for CRC



Yu, J and Kim R et al J Immunother 2024

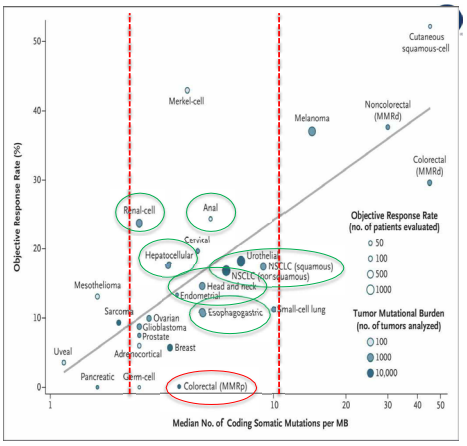
15

But… is TMB the whole story?

Many tumor types with TMB similar to MSS CRC are immune responsive…

Is MSS CRC an outlier?

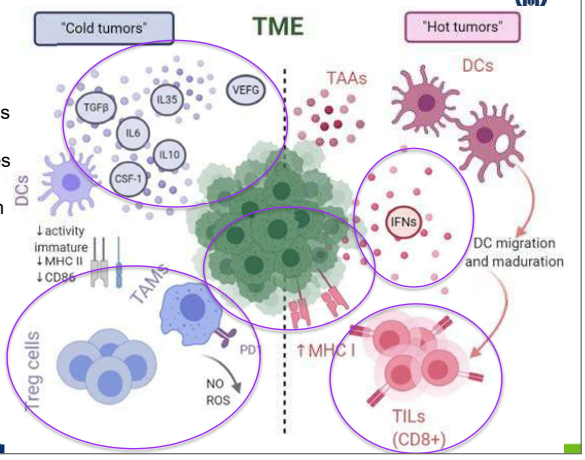
What is driving this difference?



Yarchoan NEJM 2017

Effect of the tumor microenvironment: "Cold" vs. "Hot" tumors

1. Immune suppressive cell types
2. Immune suppressive cytokines
3. Reduced antigen presentation
4. Lack of IFN signaling
5. Failure to recruit/activate TILs



Hernandez, Cancers 2021

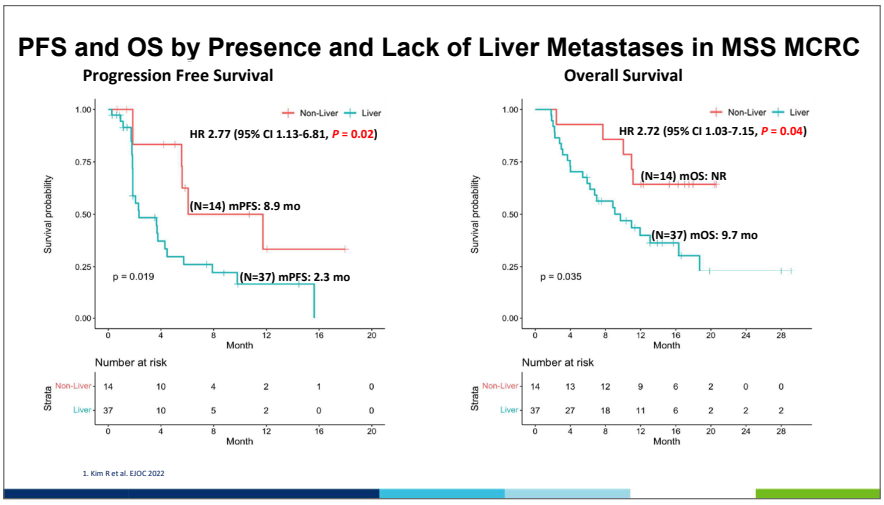
Multi-tyrosine kinase inhibitors may be synergistic with anti-PD1 blockade in pts w/o liver mets.

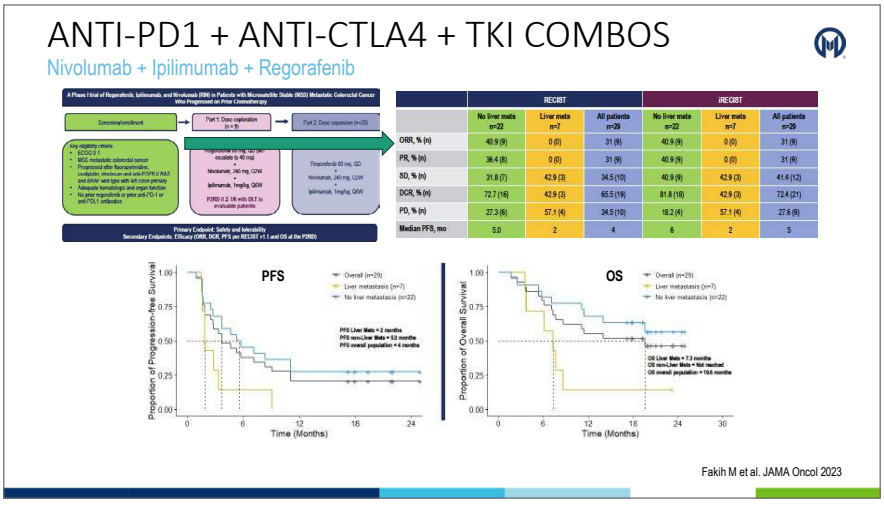
Study	Treatment	Phase	n	ORR	PFS	OS	ORR liver M1	PFS liver M1	OS liver M1	Citation
Fakih et al.	Nivolumab-Regorafenib	2	70	7%	1.8 m	12 m	**Liver +**: 0% **Liver -**: 22%			Fakih M et al. ASCO 2021
Kim et al.	Nivolumab-Regorafenib	1b	52	8%	4.3 m	11.1 m	**Liver +**: 3.6% **Liver -**: 37.5%	**Liver +**: 1.8 m **Liver -**: 3.5 m	**Liver +**: 10.8 m **Liver -**: 12 m	Kim R et al. EJC 2022
Barzi et al.	Pembrolizumab-Regorafenib	1/2	73	0%	2 m	10.9 m				Barzi A et al. ASCO 2022
Cousin et al.	Avelumab-Regorafenib	2	48	0%	3.6 m	10.8 m				Cousin S et al. CCR 2021
Gomez-Roca et al.	Pembrolizumab-Lenvatinib	2	32	22%	2.3 m	7.5 m				Gomez-Roca et al. ASCO 2021
Saeed et al.	Durvalumab-Cabozantinib	2	36	28%	4.4 m	9.1 m				Saeed et al. ASCO 2022

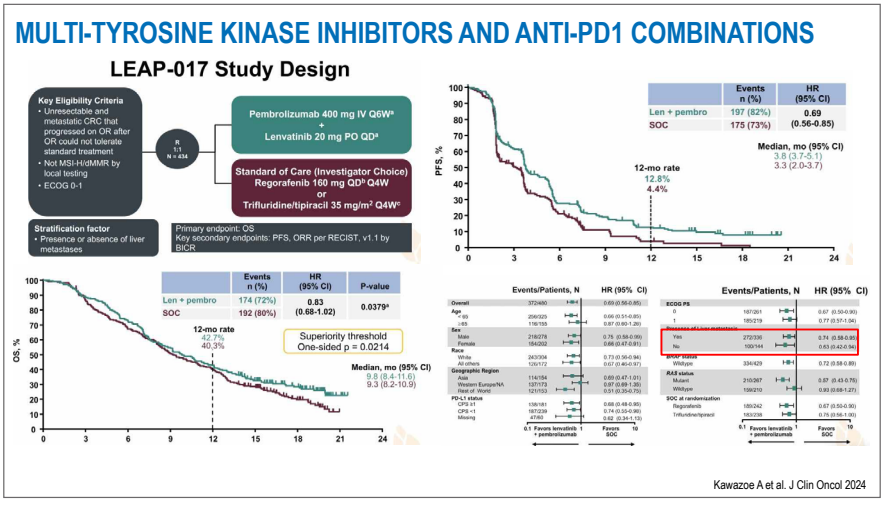
Colorectal Liver Metastases- Mechanisms of Immune Resistance??

- Liver microenvironment is immunosuppressive which need to be elucidated.
- Liver metastases may induce a systemic immunosuppressive effect, thereby inhibiting antitumor immunity- ie. lower CD8+ T-cell infiltration[1].
- Liver metastasis attracts immunosuppressive macrophages that induce apoptosis of tumor antigen–specific T cells within the liver [2].
- Liver metastasis and accumulation of Tregs[3].

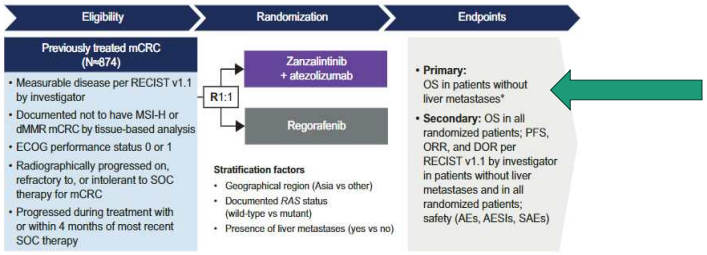
1. Tumeh PC et al Cancer Immunol Res. 2017.
2. Yu J et al Nat Med. 2021
3. Katz, S.C. et al Ann. Surg. Oncol. 2013


PFS and OS by Presence and Lack of Liver Metastases in MSS MCRC
Progression Free Survival
Non-Liver
Liver
HR 2.77 (95% CI 1.13-6.81, P = 0.02)
(N=14) mPFS: 8.9 mo
(N=37) mPFS: 2.3 mo
p = 0.019
Survival probability
Month
Number at risk
Strata
Non-Liver 14 10 4 2 1 0
Liver 37 10 5 2 0 0
Overall Survival
HR 2.72 (95% CI 1.03-7.15, P = 0.04)
(N=14) mOS: NR
(N=37) mOS: 9.7 mo
p = 0.035
Non-Liver 14 13 12 9 6 2 0 0
Liver 37 27 18 11 6 2 2 2
1. Kim R et al. EJOC 2022


ANTI-PD1 + ANTI-CTLA4 + TKI COMBOS
Nivolumab + Ipilimumab + Regorafenib
A Phase I trial of Regorafenib, Ipilimumab, and Nivolumab (IRN) in Patients with Microsatellite Stable (MSS) Metastatic Colorectal Cancer Who Progressed on Prior Chemotherapy
Concomitant Regorafenib 80 mg, QD + Nivolumab, 240 mg, Q2W + Ipilimumab, 1 mg/kg, Q6W
Primary Endpoint: Safety and tolerability
Secondary Endpoints: Efficacy (ORR, DCR, PFS per RECIST v1.1 and OS at the P2RD)
RECIST
iRECIST
No liver mets n=22
Liver mets n=7
All patients n=29
ORR, % (n) 40.9 (9) 0 (0) 31 (9) 40.9 (9) 0 (0) 31 (9)
PR, % (n) 36.4 (8) 0 (0) 31 (9) 40.9 (9) 0 (0) 31 (9)
SD, % (n) 31.8 (7) 42.9 (3) 34.5 (10) 40.9 (9) 42.9 (3) 41.4 (12)
DCR, % (n) 72.7 (16) 42.9 (3) 65.5 (19) 81.8 (18) 42.9 (3) 72.4 (21)
PD, % (n) 27.3 (6) 57.1 (4) 34.5 (10) 18.2 (4) 57.1 (4) 27.6 (8)
Median PFS, mo 5.0 2 4 6 2 5
PFS
Overall (n=29)
Liver metastasis (n=7)
No liver metastasis (n=22)
Proportion of Progression-free Survival
Time (Months)
OS
Proportion of Overall Survival
Fakih M et al. JAMA Oncol 2023


MULTI-TYROSINE KINASE INHIBITORS AND ANTI-PD1 COMBINATIONS
LEAP-017 Study Design
Key Eligibility Criteria
• Unresectable and metastatic CRC that progressed on OR after OR could not tolerate standard treatment
• Not MSI-H/dMMR by local testing
• ECOG 0-1
R 1:1 N = 434
Pembrolizumab 400 mg IV Q6W[a] + Lenvatinib 20 mg PO QD[a]
Standard of Care (Investigator Choice) Regorafenib 160 mg QD[b] Q4W or Trifluridine/tipiracil 35 mg/m² Q4W[c]
Stratification factor
• Presence or absence of liver metastases
Primary endpoint: OS
Key secondary endpoints: PFS, ORR per RECIST, v1.1 by BICR
Events n (%) HR (95% CI)
Len + pembro 197 (82%) 0.69 (0.56-0.85)
SOC 175 (73%)
Median, mo (95% CI)
3.8 (3.7-5.1)
3.3 (2.0-3.7)
12-mo rate
12.8%
4.4%
PFS, %
Events n (%) HR (95% CI) P-value
Len + pembro 174 (72%) 0.83 (0.68-1.02) 0.0379*
SOC 192 (80%)
12-mo rate
42.7%
40.3%
Superiority threshold
One-sided p = 0.0214
Median, mo (95% CI)
9.8 (8.4-11.6)
9.3 (8.2-10.9)
OS, %
Events/Patients, N
HR (95% CI)
Favors lenvatinib + pembrolizumab
Favors SOC
Kawazoe A et al. J Clin Oncol 2024

STELLAR-303: randomized phase III study of zanzalintinib + atezolizumab in previously treated metastatic colorectal cancer



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CTLA-4 story ??

Summary of results from clinical trials investigating immune checkpoint inhibitors in chemotherapy refractory MSS colorectal cancer

Study, Design, Drug	Microsatellite instability status	Dose	ORR	DCR	Median PFS	Median OS	Autor, NCT, [Reference]
KEYNOTE 016, Phase II, Parallel cohorts, Pembrolizumab	Cohort A: MSI-H CRC (N=10) Cohort B: MSS CRC (N=18)	Pembrolizumab 10mg/kg q2wks	40% (4/10) 0% (0/18)	90% (9/10) 11% (2/18)	Not reached 2.2 mo	Not reached 5.0 mo	Le et al, NCT01876511, [33]
CheckMate 142, Phase II, Multi-Cohorts, Nivolumab ± Ipilimumab	23 CRC pts with non-MSI-H were included	Nivolumab 1 or 3mg/kg q3wks + Ipilimumab 1 or 3mg/kg q3wks 3pts (N1+I1), 10pts (N1+I3), 10pts (N3+I1)	N/A	N/A	1.4 mo	N/A	Overman et al, NCT02060188, [42]
CCTG CO.26 , Phase II, RCT of D+T+BSC vs BSC	119 pts in D+T arm: 98% MSS, 1% MSI-H, 1% Unknown 61pts in BSC arm: 80% MSS, 2% MSI-H, 18% Unknown	Durvalumab 1500mg q4 wks + Tremelimumab 75mg q4 wks (only 4 cycles)	1% (1/119) 0% (0/61)	22.7% (27/119) 6.6% (4 /61)	1.8 mo 1.9 mo (HR, 1.01; 0.76-1.34; P = .97)	6.6 mo 4.1 mo (HR, 0.72; 0.54-0.97; P = .07) In subgroup analysis of patients with MSS: HR, 0.66; 0.48-0.89; P = .02)	Chen et al, NCT02870920, [43]

Abbreviation: BSC, Best supportive care; CCTG, Canadian cancer trials group; CRC, Colorectal cancer; DCR, Disease control rate; D+T, Durvalumab and tremelimumab; Mo, Months; MSI-H, Microsatellite instability-high; MSS, Microsatellite stable; N/A, Not available; ORR, Overall response rate; OS, Overall survival; PFS, Progression-free survival; Pts, Patients; RCT, Randomized clinical trial; Wks, Weeks.
*Atezolizumab + cobimetinib vs Regorafenib HR, 1.25; 0.94–1.65. Atezolizumab vs Regorafenib HR, 1.39; 1.00 – 1.94.
**Atezolizumab + cobimetinib vs Regorafenib HR, 1.00; 0.73–1.38; P= .99. Atezolizumab vs Regorafenib HR, 1.19; 0.83 – 1.71; P= .34.

Sahin and R.Kim et al . ASCO Educational Book 2022

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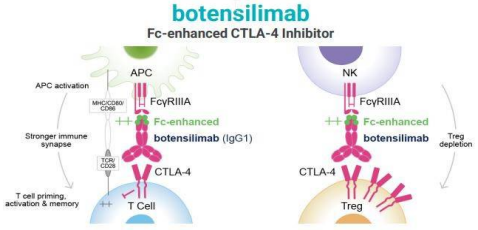
The CTLA-4 story is not over yet….

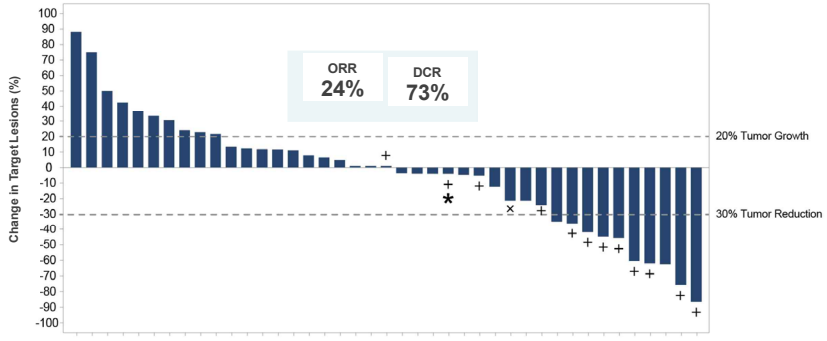


- **Enhanced** T cell priming, expansion, memory[5,6]
- **Enhanced** frequency of APCs
- **Enhanced** Treg depletion
- **Reduced** complement mediated toxicity

Bullock et al. Nat Med 2024

Slide Courtesy M Chalabi

Combination of PD-1 and modified CTLA-4 (botensilimab) in MSS CRC



El-Khoury, et al. WCGIC 2022

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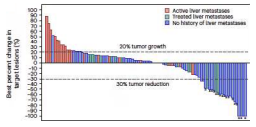
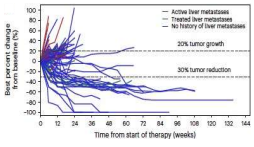
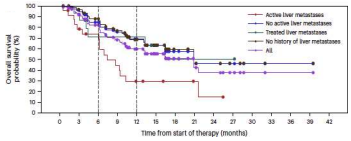
ANTI-PD1 + ANTI-CTLA4 COMBOS

Botensilimab + Anti-PD-1 (Balstilimab) chemorefractory MSS mCRC



	Total (142/101)	NLM (77)	LM (24)
ORR (%)	17	23	0
DCR (%)	61	73	25
mPFS (m)	3.5	4.1	1.4
mOS (m)	20.9	20.9	7.4





Bullock AJ et al. Nat Med 2024

Phase II trial - Press Release July 18 2024

Topline Interim Phase 2 Data

	BOT + BAL 75 mg (n= 62)	BOT+BAL 150 mg (n=61)	BOT 75 mg (n=38)	BOT 150 mg (n=40)	SOC (n=33)
ORR % (95% CI) n/nn	19.4* (10.4, 31.4) 12/62	8.2 (2.7, 18.1) 5/61	0 (0.0, 9.3) 0/38	7.5 (1.6, 20.4) 3/40	0 (0.0, 10.6) 0/33
Follow-Up (m) Mean (SD) Range	9.5 (2.77) 1.2, 15.7	9.1 (3.25) 0.1, 16.6	7.8 (4.37) 0.2, 14.8	8.2 (4.53) 0.7, 17.1	5.5 (5.30) 0.0, 13.0

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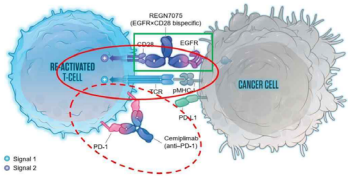
What is the future?

REGN7075 (EGFRxCD28) + Cemipilimab (anti-PDL1)

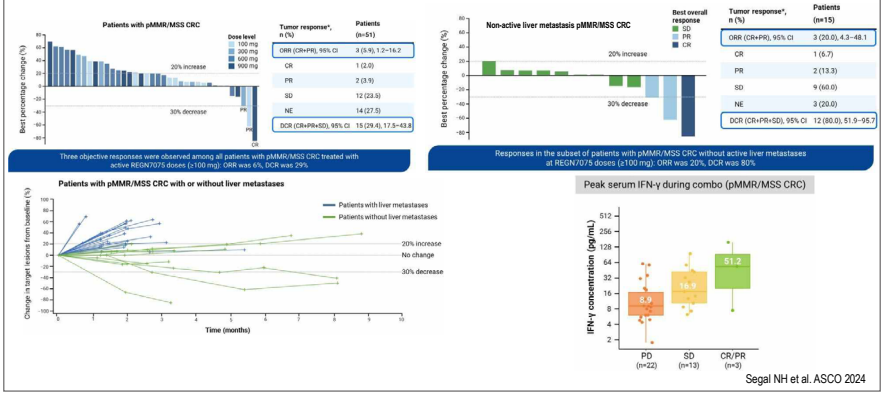
- REGN7075 aims to augment T cells and turn "cold" tumors "hot"
- REGN7075 binds EGFR on tumors and CD28 on T cells at the tumor site
- REGN7075 is designed to enhance TCR signalling (Signal 1) by:
  - Inducing Signal 2 via CD28
  - Leading to deeper T-cell activation and proliferation
- Combination of REGN7075 with cemiplimab (anti-PD-1) aims to leverage the natural antitumor immunity of T cells

Mechanism of action of REGN7075



Segal NH et al. ASCO 2024

REGN7075 (EGFRxCD28) + Cemipilimab (anti-PDL1)



Segal NH et al. ASCO 2024

Take Home messages

- Mismatch repair testing is standard of care for all patients with CRC, especially those with stage IV disease
- Immune checkpoint inhibitor therapy is an important option in the first-line setting for patients with CRC and for those in the second line and beyond who have not been exposed previously
- Immunotherapy in MSS CRC is NOT ready for prime time.
- Current efforts are focused on combination strategies aiming at turning “immune tolerant/cold ” tumors into “immune competent/hot ” tumors.
- We need better biomarkers to identify the patients that get benefit
- Multiple immunotherapy approaches are being explored in mismatch repair proficient patients, and we wait eagerly for a regimen to break through

George J. CHANG
MD Anderson Cancer Center, USA

Education

1987-1991	University of California, Berkeley, California
	A.B., Biochemistry, Magna cum Laude
1991-1995	University of California, School of Medicine, Los Angeles,
	California, Doctor of Medicine
2004-2007	The University of Texas Health Science Center at Houston Medical School
	Masters of Science in Clinical Research
2021-2023	Harvard T.H. Chan, School of Public Health
	Master in Health Care Management

Professional Experience

2019-present	Clinical Professor (adjunct),
	Department of Surgery, The University of Texas, Medical Branch
2020-present	Associate Vice President, Regional Surgery Strategy
	The University of Texas, MD Anderson Cancer Center
2020-present	Department Chair ad interim, Department of Colon and Rectal Surgery
	The University of Texas, MD Anderson Cancer Center

Room 2

[Benign Colorectal Diseases] Functional Problems after Colorectal Surgery

Chairs

Kyu Joo PARK

Seoul National University Hospital, Korea

Ricardo ESCALANTE

Central University of Venezuela, Venezuela

Fidel TOUMA
Northern Health, Melbourne, Australia

Professional Experience

Dr Fidel Touma is an experienced General and Laparoscopic Consultant Surgeon with a special interest in colorectal surgery. He was the pioneer of laparoscopic general surgery in the province of Hama, Syria, and extensively contributed to the education and training of laparoscopic surgery for more than 15 years.

Fidel moved to Australia in 2014 and was recognised as a consultant general and laparoscopic surgeon in 2015 by Royal Australasian College of Surgeons (RACS). He holds appointments as a consultant general surgeon with The Northern Hospital (Public), John Fawkner Private Hospital, and Northern Private Hospital.

Throughout his tenure as a general surgeon with a special interest in colorectal surgery, Mr Touma has always strived to gain new insights and techniques to advance his practice to the forefront of the surgical arena.

Ileo-anal Pouch Dysfunction

Fidel TOUMA

Northern Health, Melbourne, Australia

Restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA), initially described by Parks and Nicholls in 1978, has emerged as the surgical procedure of choice in most patients with medically unresponsive ulcerative colitis (UC), indeterminate colitis, UC complicated by colonic dysplasia or neoplasia, and familial adenomatous polyposis (FAP). This procedure facilitates the removal of the diseased colon and rectum while preserving gastrointestinal continuity without the need for a permanent ileostomy, leading to significant symptomatic relief, avoidance of medication use for UC, a decreased risk of dysplasia and colon cancer, and improvement in quality of life. Despite the generally favourable functional outcomes reported post-IPAA, patients may experience a range of early and late complications that can affect pouch functionality. These complications encompass inflammatory, infectious, postsurgical, structural, functional, and dysplastic or neoplastic consequences within the pouch. This presentation aims to provide a review of the current literature on ileo-anal pouch dysfunction and a strategic framework for the diagnosis and management of these complications.

Chang Woo KIM

Ajou University School of Medicine, Korea

Education

MD, Yonsei University College of Medicine, Seoul, Korea

PhD, Yonsei University College of Medicine, Seoul, Korea

Residency, Department of Surgery, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

Fellowship, Division of Colon and Rectal Surgery, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

Professional Experience

Clinical Associate Professor, Department of Surgery, Kyung Hee University Hospital at Gangdong, Seoul, Korea

Associate Professor, Department of Surgery, Ajou University Hospital, Suwon, Korea

Chief, Colorectal Cancer Center & Chief, Division of Colorectal Surgery, Ajou University Hospital, Suwon, Korea

Bong Hyeon KYE

The Catholic University of Korea, Korea

Education

2001	Doctor of Medicine, The Catholic University of Korea, Seoul, Korea
2013	Doctor of Philosophy in Medical Science, Postgraduate School of Medicine, The Catholic University of Korea

Professional Experience

2016-2017	Research associate, Department of Colorectal Surgery, Tampa General Hospital, University of South Florida, Tampa, FL, USA
2018-2019	Associate professor, Department of Surgery, Seoul St. Mary's Hospital, The Catholic University of Korea
2019-2023	Associate professor, Department of Surgery, St. Vincent's Hospital, The Catholic University of Korea Chief of Colorecal Cancer Center in St. Vincent's Hospital
2023-present	Professor, Department of Surgery St. Vincent's Hospital, The Catholic University of Korea Chief of Department of Surgery in St. Vincent's Hospital Chief of Colorecal Cancer Center in St. Vincent's Hospital

Heung-Kwon OH

Seoul National University Bundang Hospital, Korea

Education

1995-2002	Seoul National University College of Medicine, Seoul, Korea
2005-2011	Graduate School of Medicine, Seoul National University, Seoul, Korea
	Master's degree (Surgery)
2011-2020	Ph.D. Degree (Surgery)

Professional Experience

2013-2015	Assistant Professor, Department of Surgery, SNUBH
2015-2020	Associate Professor, Department of Surgery, SNUBH
2020-Present	Professor, Department of Surgery, SNUBH

Dynamic nature of postoperative gastrointestinal quality of life after colorectal surgery

Heung-Kwon OH

Seoul National University Bundang Hospital, Korea

The quality of life (QoL) following colorectal surgery, particularly in relation to gastrointestinal function, is a critical area of concern for both patients and healthcare providers. This lecture will explore the dynamic nature of postoperative gastrointestinal QoL, examining the factors that influence patient outcomes in the short-term and long-term recovery periods.

While colorectal surgery is a common procedure, there is a notable lack of comprehensive research focused on the postoperative quality of life (QoL), especially regarding gastrointestinal function. This gap in the literature highlights the need for more focused studies and discussions on how different surgical approaches might influence QoL outcomes. In this lecture, we will emphasize the importance of addressing this gap and explore the available research on this crucial topic.

In this session, we will also introduce and discuss our latest multicenter prospective study, which assesses the longitudinal gastrointestinal quality of life using the Gastrointestinal Quality of Life Index (GIQLI) in patients undergoing laparoscopic colorectal cancer surgery. This research provides valuable insights into the reliability of the Korean version of the GIQLI and identifies significant risk factors for postoperative QoL impairment, as well as the estimated time to recovery.

Key topics will include:

- Immediate Postoperative Phase: Initial recovery of bowel function, pain management, and early indicators of QoL outcomes.
- Medium-term Recovery: The progression of gastrointestinal function over weeks to months post-surgery, with a focus on diet, bowel habits, and the influence of adjuvant therapies.
- Long-term QoL: Chronic gastrointestinal issues, including bowel incontinence, obstruction, and the impact on overall QoL years after surgery.
- Latest Research Findings: Insights from our recent study on the use of the GIQLI, highlighting postoperative QoL recovery timelines and the impact of specific surgical practices on long-term outcomes.

Additionally, we will consider patient-centered approaches to managing these challenges, including preoperative counseling, postoperative support, and the role of personalized rehabilitation strategies.

I hope that this lecture will not only provide valuable insights into the postoperative gastrointestinal quality of life after colorectal surgery but also foster a dynamic and engaging discussion. I look forward to an interactive session where we can share knowledge, explore different perspectives, and ensure a productive and enjoyable time together.

Audrius DULSKAS
Vilnius University, Lithuania

Education

1990-2002	Vilnius Simonas Stanevicius secondary school
2002-2008	Vilnius university Faculty of Meicine
2008-2009	Clinics of Vilnius university, Internship
2009-2014	Clinics of Vilnius university
2016	PhD thesis “Changes in urogenital and anorectal function in patients undergoing radical surgery for rectal cancer”
2011-2018	London, UK ACLS + ACLS refresher (Acute Cardiac Life Support) PALS + PALS refresher (Pediatric Acute Life Support) RMO training Mandarory training Medical english certificate

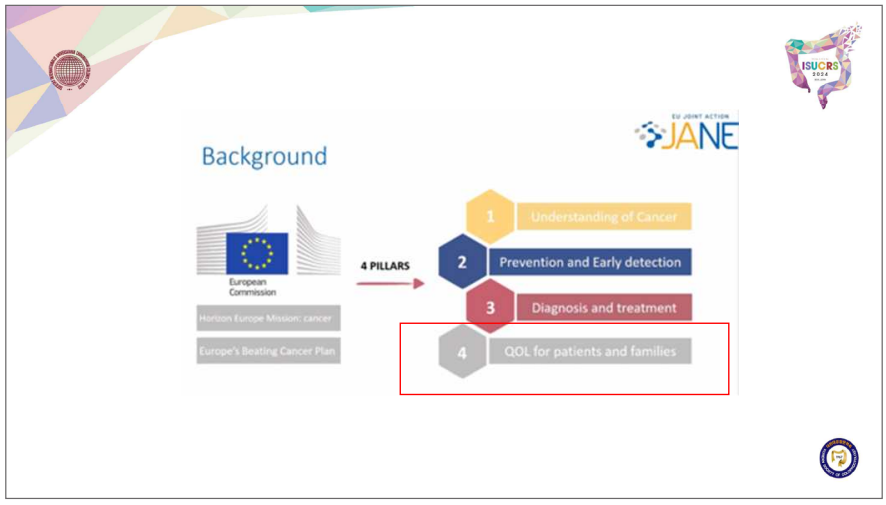
Professional Experience

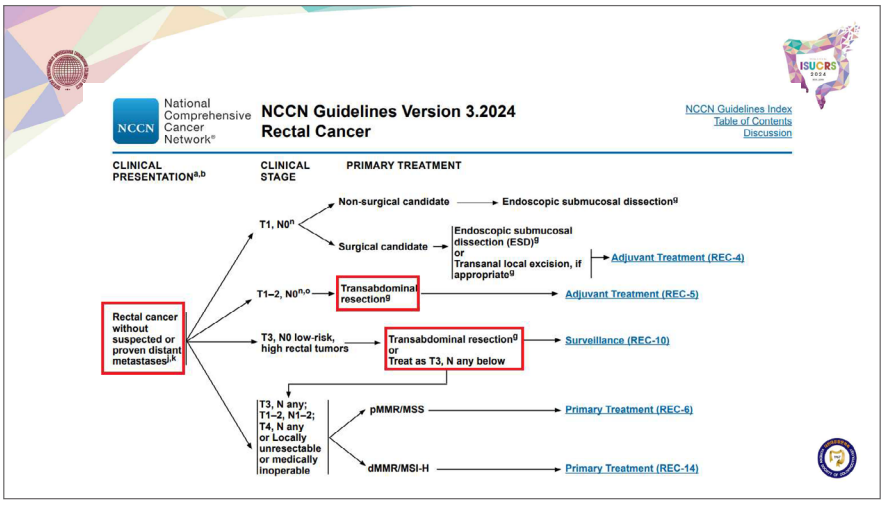
2019	Board member of National Cancer Institute Council - vice president
2018-2020	University of Applied Sciences Faculty of Health Care - associate professor
2020	Vilnius University Faculty of Medicine - associate professor
2022	Scientific advisor of the Director at National Cancer Institute

Conflict of Interest (COI) Disclosure

Audrius Dulskas

None




National Comprehensive Cancer Network
NCCN Guidelines Version 3.2024
Rectal Cancer
NCCN Guidelines Index
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Surgical candidate
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Adjuvant Treatment (REC-5)
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Transabdominal resection[g] or Treat as T3, N any below
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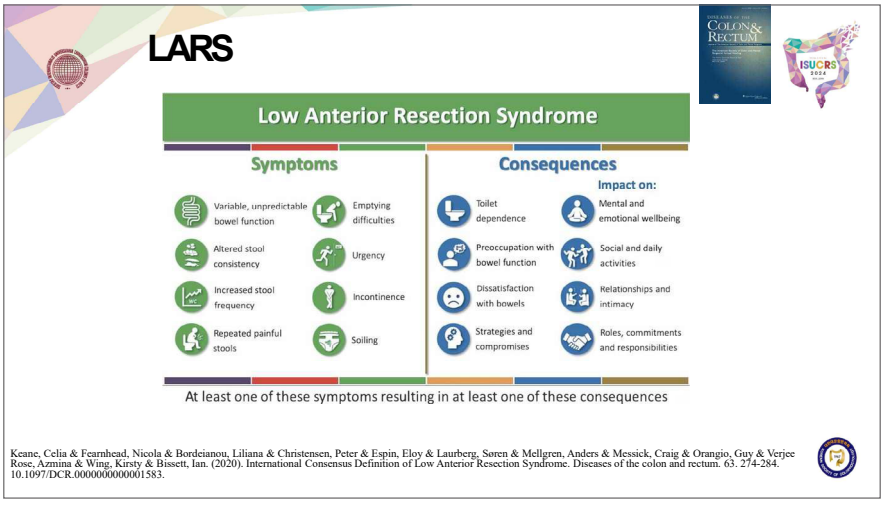
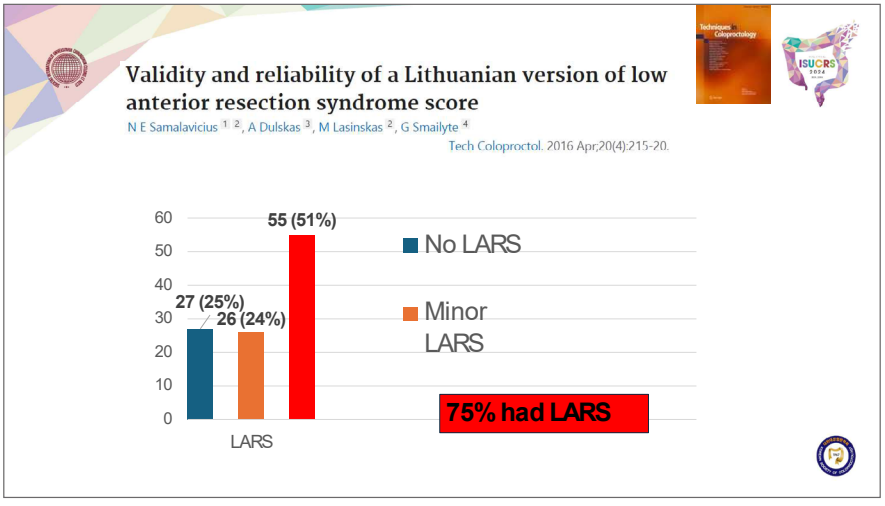
pMMR/MSS
Primary Treatment (REC-6)
dMMR/MSI-H
Primary Treatment (REC-14)


LARS
Low Anterior Resection Syndrome
Symptoms
Variable, unpredictable bowel function
Emptying difficulties
Altered stool consistency
Urgency
Increased stool frequency
Incontinence
Repeated painful stools
Soiling
Consequences
Impact on:
Toilet dependence
Mental and emotional wellbeing
Preoccupation with bowel function
Social and daily activities
Dissatisfaction with bowels
Relationships and intimacy
Strategies and compromises
Roles, commitments and responsibilities
At least one of these symptoms resulting in at least one of these consequences
Keane, Celia & Fearnhead, Nicola & Bordeianou, Liliana & Christensen, Peter & Espin, Eloy & Laurberg, Søren & Mellgren, Anders & Messick, Craig & Orangio, Guy & Verjee Rose, Azmina & Wing, Kirsty & Bissett, Ian. (2020). International Consensus Definition of Low Anterior Resection Syndrome. Diseases of the colon and rectum. 63. 274-284. 10.1097/DCR.0000000000001583.


Validity and reliability of a Lithuanian version of low anterior resection syndrome score
N E Samalavicius [1,2], A Dulskas [3], M Lasinskas [2], G Smailyte [4]
Tech Coloproctol. 2016 Apr;20(4):215-20.
60
50
40
30
20
10
0
55 (51%)
27 (25%)
26 (24%)
No LARS
Minor LARS
LARS
75% had LARS

Annals of COLOPROCTOLOGY

Validation of Korean Version of Low Anterior Resection Syndrome Score Questionnaire

Author information ▶ Article notes ▶
Copyright and License information ▶

Chang Woo Kim[1], Woon Kyung Jeong[2], Gyung Mo Son[3], Ik Yong Kim[4], Ji Won Park[5], Seung-Yong Jeong[5], Kyu Joo Park[5], Suk-Hwan Lee[1]

46 patients had no LARS (31.5%)
36 had minor LARS (24.7%)
64 had major LARS (43.8%)

SCIENTIFIC REPORTS

Long-term bowel dysfunction following low anterior resection

Sci Rep. 2020 Jul 17;10(1):11882.

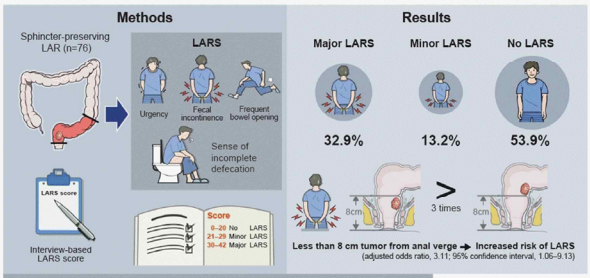
Audrius Dulskas [1 2 3], Povilas Kavaliauskas [4], Lukas Pilipavicius [5], Mantas Jodinskas [5], Martynas Mikalonis [6], Narimantas E Samalavicius [7 8 9]

33 (26.4 proc.) – major LARS
25 (20 proc.) – minor LARS

46.4%

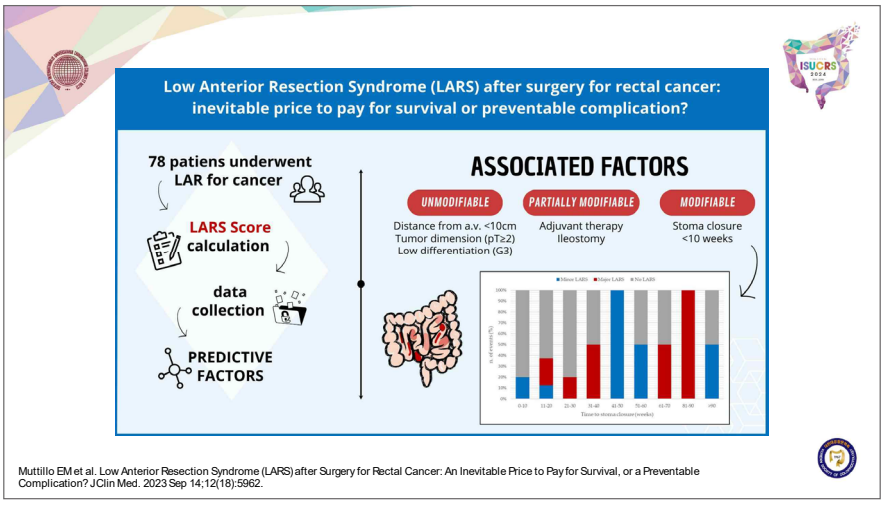
Graphical abstract

Purpose To identify the prevalence and risk factors associated with the development of low anterior resection syndrome (LARS)

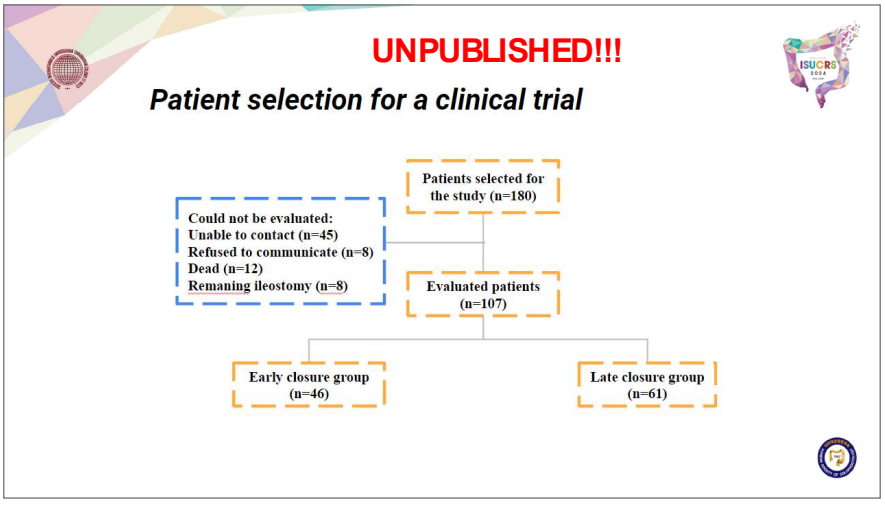


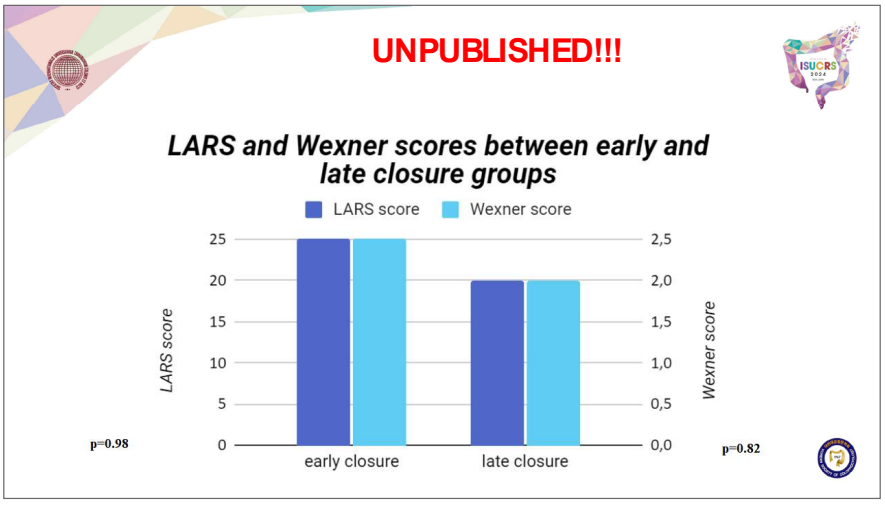
Conclusion Low tumor height was a significant risk factor that has a negative impact on bowel function after surgery.

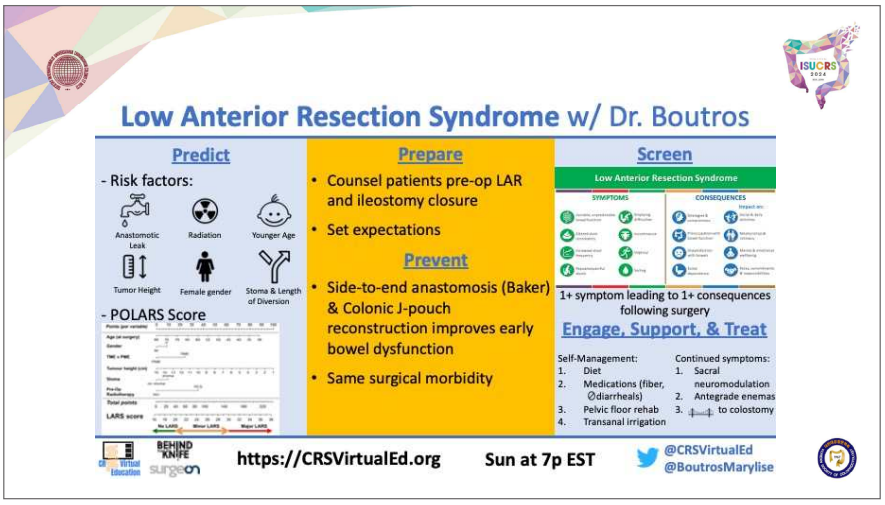
Annals of COLOPROCTOLOGY
Lim and Wan Zain, et al.

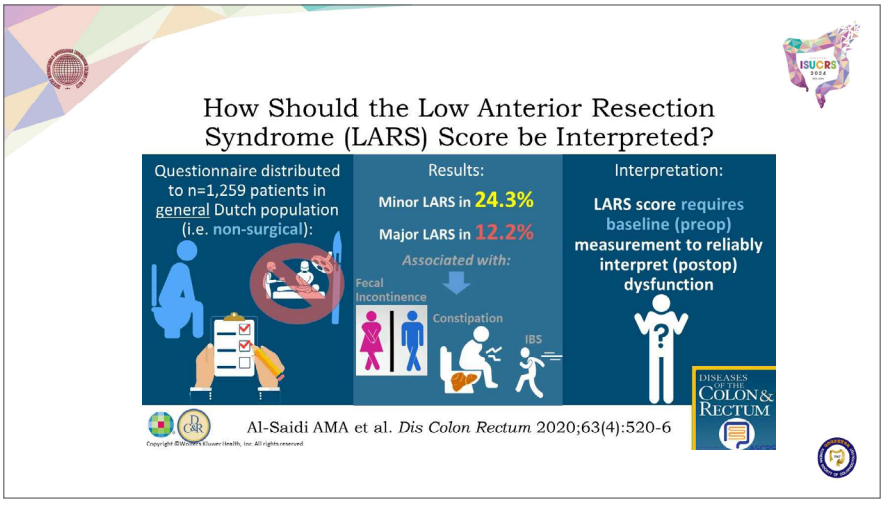


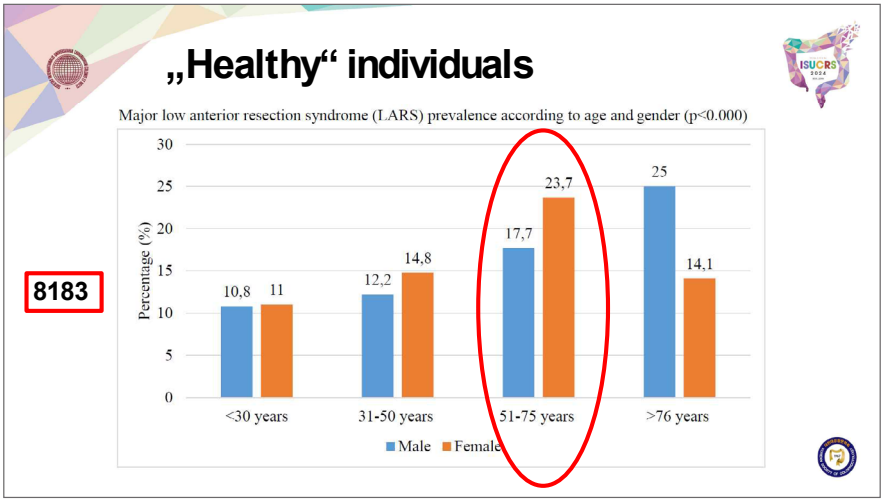
Muttillo EM et al. Low Anterior Resection Syndrome (LARS) after Surgery for Rectal Cancer: An Inevitable Price to Pay for Survival, or a Preventable Complication? JClin Med. 2023 Sep 14;12(18):5962.






Low Anterior Resection Syndrome w/ Dr. Boutros
Predict
- Risk factors:
Anastomotic Leak
Radiation
Younger Age
Tumor Height
Female gender
Stoma & Length of Diversion
- POLARS Score
Prepare
• Counsel patients pre-op LAR and ileostomy closure
• Set expectations
Prevent
• Side-to-end anastomosis (Baker) & Colonic J-pouch reconstruction improves early bowel dysfunction
• Same surgical morbidity
Screen
Low Anterior Resection Syndrome
SYMPTOMS
CONSEQUENCES
1+ symptom leading to 1+ consequences following surgery
Engage, Support, & Treat
Self-Management:
1. Diet
2. Medications (fiber, Ødiarrheals)
3. Pelvic floor rehab
4. Transanal irrigation
Continued symptoms:
1. Sacral neuromodulation
2. Antegrade enemas
3. to colostomy
https://CRSVirtualEd.org
Sun at 7p EST
@CRSVirtualEd
@BoutrosMarylise


How Should the Low Anterior Resection Syndrome (LARS) Score be Interpreted?
Questionnaire distributed to n=1,259 patients in general Dutch population (i.e. non-surgical):
Results:
Minor LARS in 24.3%
Major LARS in 12.2%
Associated with:
Fecal Incontinence
Constipation
IBS
Interpretation:
LARS score requires baseline (preop) measurement to reliably interpret (postop) dysfunction
Al-Saidi AMA et al. Dis Colon Rectum 2020;63(4):520-6
DISEASES OF THE COLON & RECTUM

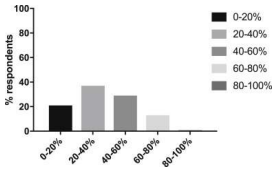

„Healthy“ individuals
Major low anterior resection syndrome (LARS) prevalence according to age and gender (p<0.000)
Percentage (%)
30
25
20
15
10
5
0
10,8
11
12,2
14,8
17,7
23,7
25
14,1
<30 years
31-50 years
51-75 years
>76 years
Male
Female

8183

Awareness and management of low anterior resection syndrome: A Dutch national survey among colorectal surgeons and specialized nurses

Gwendolyn Thomas [1], Maarten van Heinsbergen [2], Joost van der Heijden [1], Gerrit Slooter [1], Joop Konsten [2], Sabrina Maaskant [3]

Eur J Surg Oncol. 2019 Feb;45(2):174-179.



Awareness and management of low anterior resection syndrome: A Dutch national survey among colorectal surgeons and specialized nurses

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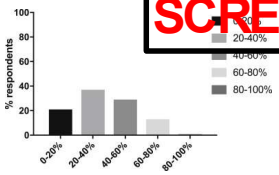
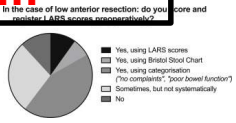
Eur J Surg Oncol. 2019 Feb;45(2):174-179.

SCREEN for IT!!!





Different specialist perspective…

Chen TY, Emmertsen KJ, Laurberg S. Bowel dysfunction after rectal cancer treatment: a study comparing the specialist's versus patient's perspective.

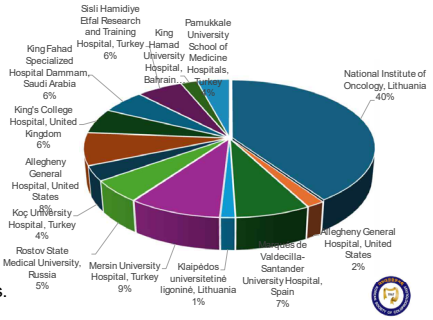
…patient perspective

Chen TY, Emmertsen KJ, Laurberg S. Bowel dysfunction after rectal cancer treatment: a study comparing the specialist's versus patient's perspective.

UNPUBLISHED!!!

Methods

- Study design: International multicentre study.
- Inclusion criteria: Patients undergoing rectal resections for cancer.
- Function assessed preoperatively and 6 months after the surgery. Patients filled LARS questionnaires preop and 6 months after the operation.
- POLARS score was calculated via online tool using patients' data.
- Results were compared using statistical methods.

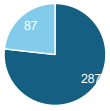


UNPUBLISHED!!!

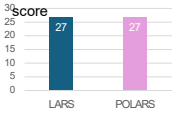
Results

- 13 hospitals in 8 countries with 287 patients were enrolled.
- 87 of the patients had sufficient data collected suitable for further interpretation.
- Median postoperative LARS and POLARS scores were the same and came back as 27.
- However, 28% of patients had significant differences in scores, with POLARS towards overpredicting the poorer bowel function compared to 6 months LARS results.
- On the other hand, 47% of patients had significant changes in LARS score evaluating LARS questionnaires (difference in values >10); 34% towards poorer bowel function, 12% function has improved.

Patients eligible for analysis



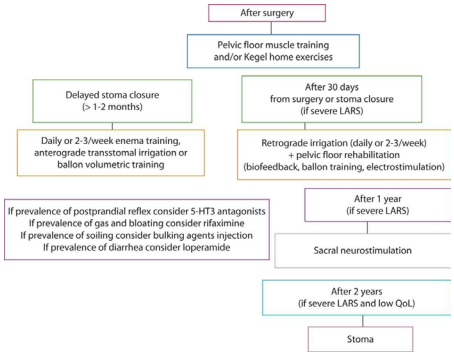
Lars vs Polars median score



Bowel function declined in 1/3 of the patients

POLARS overpredicted severity of LARS to 28% of patients

Treatment algorithm



Martellucci, Jacopo M.D.. Low Anterior Resection Syndrome: A Treatment Algorithm. Diseases of the Colon & Rectum 59(1):p 79-82, January 2016. | DOI: 10.1097/DCR.0000000000000495

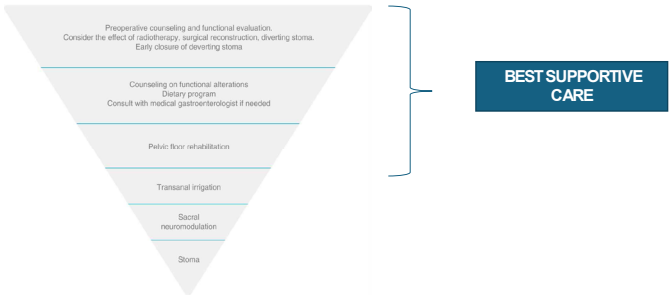
Management guidelines for low anterior resection syndrome – the MANUEL project

Peter Christensen, Coen IM Baeten, Eloy Espín-Basany, Jacopo Martellucci, Karen P Nugent, Frank Zerbib, Gianluca Pellino, Harald Rosen, MANUEL Project Working Group

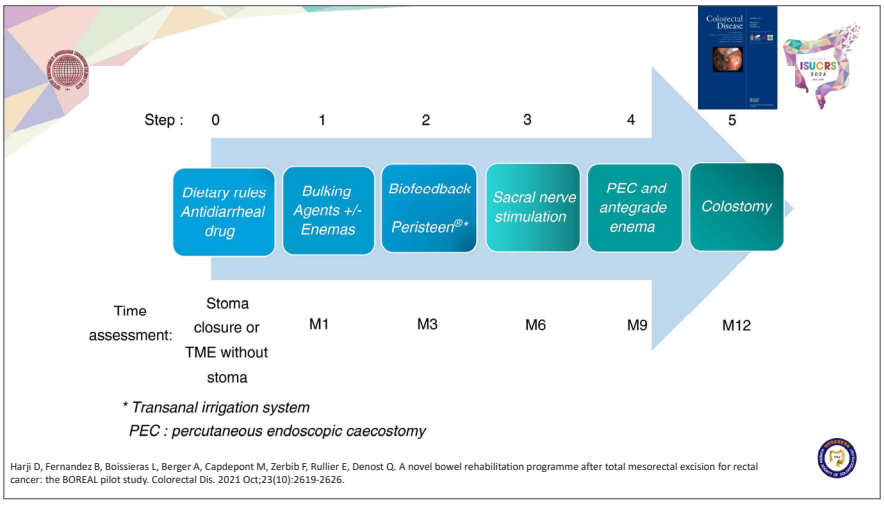
First published: 07 January 2021 | https://doi.org/10.1111/codi.15517

- Given the lack of sound evidence and the often poor quality of the studies, most of the recommendations and conclusions are based on the **opinions of the experts**.

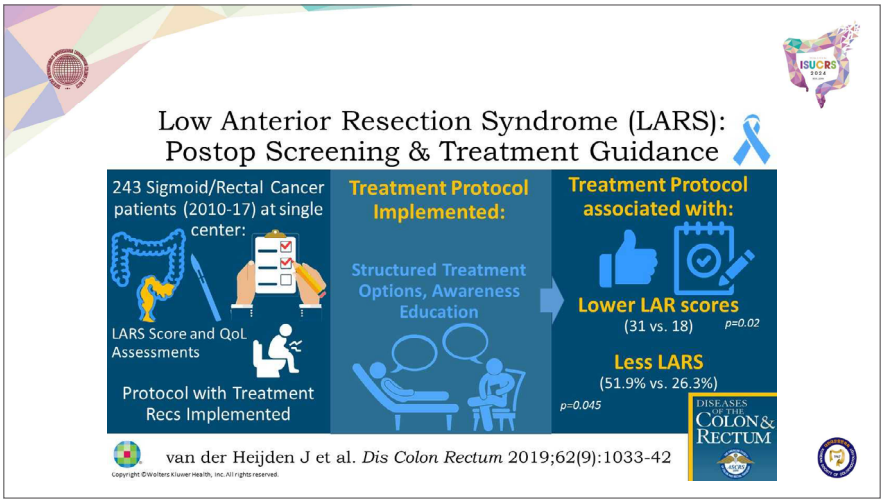
Treatment options for LARS



Colorectal Disease, Volume: 23, Issue: 2, Pages: 461-475, First published: 07 January 2021, DOI: (10.1111/codi.15517)



Harji D, Fernandez B, Boissieras L, Berger A, Capdepont M, Zerbib F, Rullier E, Denost Q. A novel bowel rehabilitation programme after total mesorectal excision for rectal cancer: the BOREAL pilot study. Colorectal Dis. 2021 Oct;23(10):2619-2626.



Transanal irrigation (TAI)

- Empty bowel – no urgency or incontinence
- Prediction of bowel movements

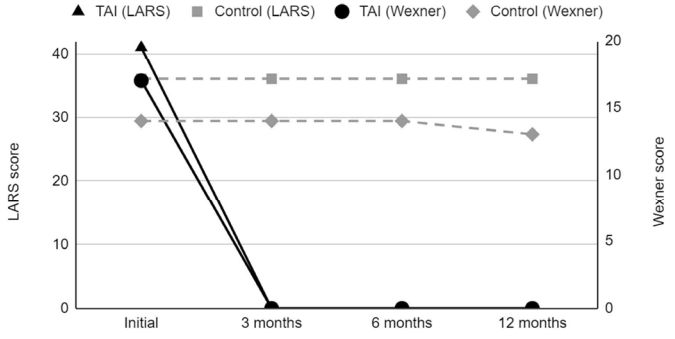
Christensen P, Baeten CIM, Espin-Basany E Management guidelines for low anterior resection syndrome—the MANUEL project. Colorectal Dis.. 2021; 23:(2)461-475
Iwama T, Imajo M, Yaegashi K, Mishima Y. Self washout method for defecational complaints following low anterior rectal resection. Jpn J Surg.. 1989; 19:(2)251-253

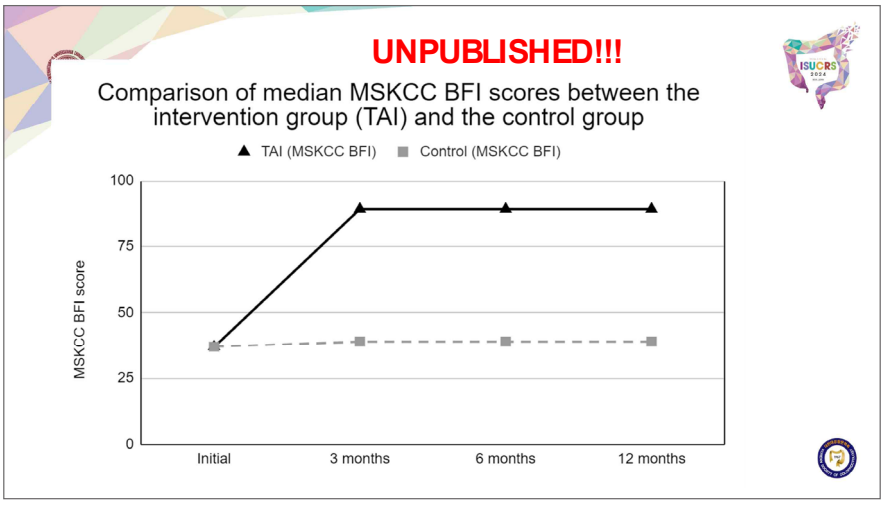
Author	Country	Year	Patients, n	Arms		Follow up
Iwama et al	Japan	1989	5	1	Retro	-
Koch et al	Holland	2009	26	1	Retro	-
Rosen et al	Austria, Switzerland	2011	14	1	Retro	2y
Martellucci et al	Italy	2018	27	1	Retro	3 mo
Rosen et al	Austria, Germany	2019	37: 19 18	2	RCT	3 mo
Rosen et al	Austria, Germany	2020	37: 19 18	2	RCT	1y
Bianco et al	Italy	2022	17	1	Retro	9 mo
Rodriguez et al	Brazil	2022	20	1	Retro	1y
Pieniowski et al	Sweden	2022	45: 22 23	2	RCT	1y

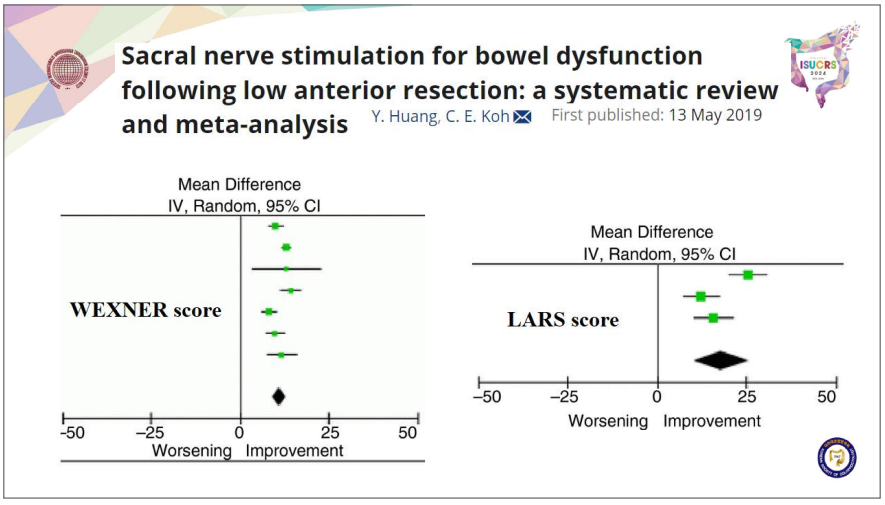
Just after ileostomy takedown

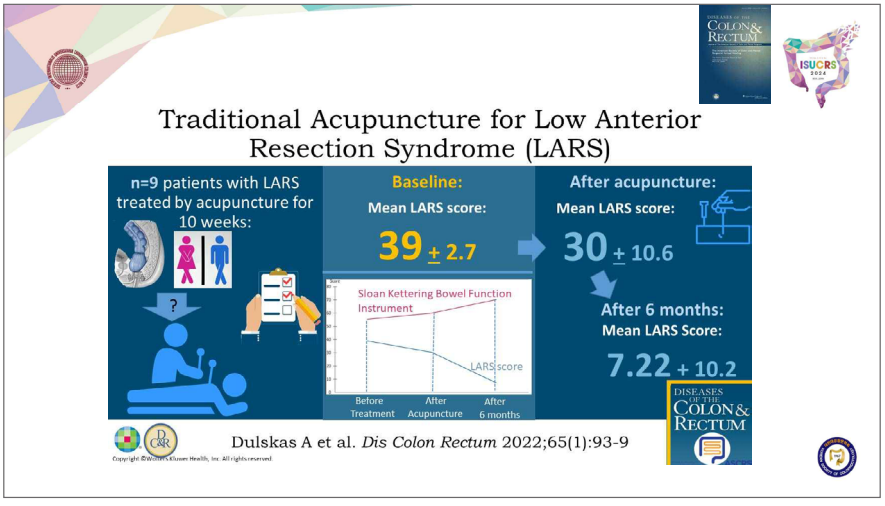
UNPUBLISHED!!!

Comparison of median LARS and Wexner scores between the intervention group (TAI) and the control group




UNPUBLISHED!!!
Comparison of median MSKCC BFI scores between the intervention group (TAI) and the control group
TAI (MSKCC BFI)
Control (MSKCC BFI)
MSKCC BFI score
100
75
50
25
0
Initial
3 months
6 months
12 months


Sacral nerve stimulation for bowel dysfunction following low anterior resection: a systematic review and meta-analysis
Y. Huang, C. E. Koh
First published: 13 May 2019
Mean Difference
IV, Random, 95% CI
WEXNER score
-50
-25
0
25
50
Worsening
Improvement
Mean Difference
IV, Random, 95% CI
LARS score
-50
-25
0
25
50
Worsening
Improvement


Traditional Acupuncture for Low Anterior Resection Syndrome (LARS)
n=9 patients with LARS treated by acupuncture for 10 weeks:
Baseline:
Mean LARS score:
39 ± 2.7
After acupuncture:
Mean LARS score:
30 ± 10.6
After 6 months:
Mean LARS Score:
7.22 ± 10.2
Sloan Kettering Bowel Function Instrument
LARS score
Before Treatment
After Acupuncture
After 6 months
Dulskas A et al. Dis Colon Rectum 2022;65(1):93-9

Rethink
L.A.R.S.

Look for it
Active self-management
Risk assessment
Shared-decision making

QOL 4 ALL
Quality of life for all

PhD student

Students


facebook
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55 following
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Seoul National University Hospital, Korea

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1994-2001 Seoul National University College of Medicine, MD.
2005-2011 Seoul National University College of Medicine, MS.
2011-2017 Seoul National University College of Medicine, PhD.

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2002-2006 Residency, Department of Surgery, Seoul National University Hospital
2010-2012 Staff, Division of Colorectal Surgery, Department of Surgery, Dongnam Inst. of Radiology & Medical Science
2012-2014 Clinical Instructor, Division of Colorectal Surgery, Department of Surgery, Seoul National University Hospital
2014-2018 Clinical Assistant Professor, Division of Colorectal Surgery, Department of Surgery, Seoul National University Hospital
2017-2019 Visiting Scholar, Department of Physiology & Cell Biology, School of Medicine, University of Nevada Reno
2018- Clinical Associate Professor, Division of Colorectal Surgery, Department of Surgery, Seoul National University Hospital

COI Disclosure

Name of Author : Seung-Bum Ryoo

I have no personal or financial interests to declare:

I have no financial support from an industry source at the current presentation.

Case I

- M/76, Rectal ca (AV4cm), cT3N+

→ preop CCRT → lapa ULAR c ileostomy → adj CTx → ileostomy take-down

→ after 1 month

→ **defecation, 10 times/day !!**

SNUH 서울대학교병원

What is your choice for this patient?

1. observation
2. fiber
3. probiotics
4. u-opioid receptor agonist (ex. loperamide)
5. 5-HT receptor blocker (ex. ramosetron, ondansetron)
6. pelvic floor muscle training (ex. biofeedback, Kegel maneuver)
7. transanal irrigation
8. sacral nerve stimulation
9. diverting stoma formation

QR code for google survey

* *You can choose multiple answers*

SNUH 서울대학교병원

How much do you expect those being effective?

1. 0%
2. 30%
3. 50%
4. 75%
5. 100%

QR code for google survey

SNUH 서울대학교병원

Treatments for LARS

TABLE 1 Treatments of low anterior resection syndrome

Treatments	*Safety	**Efficacy	Evidence	Clinical practice
Fiber	+	±	Empirical [2]	Can be tried, but rarely effective
Probiotics	+	–	RCTs [30,31]	Not usually used
Loperamide	±	++	Empirical [2]	The most commonly prescribed, But has some safety issues
5HT receptor antagonist	+	+	RCT [41] case-series [40]	Emerging, But needs more studies
Pelvic floor muscle training	+	±	RCTs [43,44] systematic reviews [42]	Controversies for outcomes Long-term effects have not been proven
Sacral nerve stimulation	±	+	Prospective studies [47,48] systematic review [49]	Mechanism of action has not been verified Long-term effects have not been proven
Transanal irrigation	±	++	RCT [46] systematic review [45]	Should be performed carefully
Permanent stoma	+	+++	Prospective study [56] case-series [57]	Lower quality of life

Note: *Safety, +, safe, ±, may not be safe in some cases. **Efficacy, +++, absolutely efficient, ++, efficient, +, relatively efficient, ±, efficient in selective cases, –, not efficient.
Abbreviation: RCT, randomized controlled trial.

SB Ryoo, Ann Gastroenterol Surg, 2023

SNUH 서울대학교병원

Case II

- F/65, A colon ca, cT3N+

→ lapa RHC c stapling anastomosis → adj CTx (for 6 mo) → F/U c NED for 2 yrs

→ **Liquid stools , 3-4 times/day !!**

SNUH 서울대학교병원

What is your choice for this patient?

1. observation
2. fiber
3. probiotics
4. natural absorbent clay (ex. deoctahedral smectite)
5. bile acid anion-binding resin (ex. cholestyramine)
6. u-opioid receptor agonist (ex. loperamide)
7. 5-HT receptor blocker (ex. ramosetron, ondansetron)
8. diverting stoma formation

QR code for google survey

** You can choose multiple answers*

SNUH 서울대학교병원

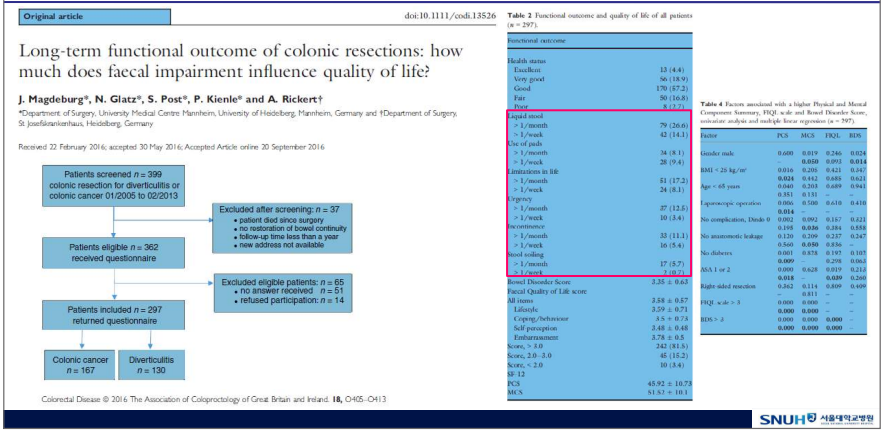
How many patients do you ask about defecation problems?

1. 0%
2. 30%
3. 50%
4. 75%
5. 100%

QR code for google survey

SNUH 서울대학교병원

Human Dignity



Original article

doi:10.1111/codi.13526

Long-term functional outcome of colonic resections: how much does faecal impairment influence quality of life?

J. Magdeburg*, N. Glatz*, S. Post*, P. Kienle* and A. Rickert†

*Department of Surgery, University Medical Centre Mannheim, University of Heidelberg, Mannheim, Germany and †Department of Surgery, St Josefskrankenhaus, Heidelberg, Germany

Received 22 February 2016; accepted 30 May 2016; Accepted Article online 20 September 2016

Patients screened $n = 399$ colonic resection for diverticulitis or colonic cancer 01/2005 to 02/2013

Excluded after screening: $n = 37$
- patient died since surgery
- no restoration of bowel continuity
- follow-up time less than a year
- new address not available

Patients eligible $n = 362$ received questionnaire

Excluded eligible patients: $n = 65$
- no answer received $n = 51$
- refused participation: $n = 14$

Patients included $n = 297$ returned questionnaire

Colonic cancer $n = 167$ | Diverticulitis $n = 130$

Colorectal Disease © 2016 The Association of Coloproctology of Great Britain and Ireland. **18**, O405–O413

Table 2 Functional outcome and quality of life of all patients ($n = 297$).

Functional outcome	
Health status	
Excellent	13 (4.4)
Very good	56 (18.9)
Good	170 (57.2)
Fair	50 (16.8)
Poor	8 (2.7)
Liquid stool	
> 1/month	79 (26.6)
> 1/week	42 (14.1)
Use of pads	
> 1/month	34 (8.1)
> 1/week	28 (9.4)
Limitations in life	
> 1/month	51 (17.2)
> 1/week	24 (8.1)
Urgency	
> 1/month	37 (12.5)
> 1/week	10 (3.4)
Incontinence	
> 1/month	33 (11.1)
> 1/week	16 (5.4)
Stool soiling	
> 1/month	17 (5.7)
> 1/week	7 (0.7)
Bowel Disorder Score	3.35 ± 0.63
Fecal Quality of Life score	
All items	3.58 ± 0.57
Lifestyle	3.59 ± 0.71
Coping/behaviour	3.5 ± 0.74
Self-perception	3.48 ± 0.48
Embarrassment	3.78 ± 0.5
Score, > 3.0	242 (81.5)
Score, 2.0–3.0	45 (15.2)
Score, < 2.0	10 (3.4)
SF-12	
PCS	45.92 ± 10.73
MCS	51.67 ± 10.1

Table 4 Factors associated with a higher Physical and Mental Component Summary, FIQL scale and Bowel Disorder Score, univariate analysis and multiple linear regression ($n = 297$).

Factor	PCS	MCS	FIQL	BDS
Gender male	0.600	0.019	0.246	0.024
	–	**0.050**	0.093	**0.014**
BMI < 26 kg/m²	0.016	0.205	0.421	0.247
	0.024	0.152	0.888	0.621
Age < 65 years	0.040	0.203	0.689	0.941
	0.351	0.131	–	–
Laparoscopic operation	0.086	0.500	0.610	0.410
	0.014	–	–	–
No complication, Dindo 0	0.002	0.092	0.157	0.221
	0.198	**0.036**	0.384	0.558
No anastomotic leakage	0.120	0.209	0.237	0.247
	0.560	**0.050**	0.936	–
No diabetes	0.001	0.878	0.197	0.107
	0.009	–	0.298	0.063
ASA 1 or 2	0.000	0.628	0.019	0.212
	0.018	–	**0.039**	0.260
Right sided resection	0.262	0.114	0.609	0.499
	–	0.811	–	–
FIQL scale > 3	0.000	0.000	–	–
	0.000	**0.000**	–	–
BDS > 2	0.000	0.000	**0.000**	–
	0.000	**0.000**	**0.000**	–

SNUH 서울대학교병원

Case III

- M/55, S colon ca, cT3N+

→ lapa AR → ERAS protocol → POD#3, vomiting & abd distension, V/S) stable

→ POD#14, still ileus

SNUH 서울대학교병원

What is your choice for this patient?

1. observation
2. encourage active ambulation
3. chowing gum
4. opioid antagonist (ex. alvimopan)
5. 5-HT agonist (ex. mosapride, resolor)
6. Ach esterase inhibitor (ex. pyridostigmine)
7. operation for adhesiolysis

QR code for google survey

** You can choose multiple answers*

SNUH 서울대학교병원

Do you use antiadhesive agent during surgery?

1. no
2. film or barrier
3. gel type
4. fluid type (5~10 ml)
5. lubricant fluid (1~2 L)

QR code for google survey

SNUH 서울대학교병원

Room 3

[KSCP–JSCP2]
Further Developed Surgical Technique with New Technology

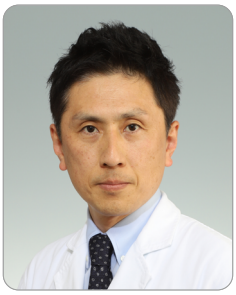
Chairs

Shigeki YAMAGUCH

Tokyo Women's Medical University, Japan

Yoon Suk LEE

The Catholic University of Korea, Korea



Hidetoshi KATSUNO

Fujita Health University, Okazaki Medical Center, Japan

Education

1990-1996	M.D., School of Medicine, Fujita Health University
2000-2004	Ph.D., Graduate School of Medicine, Fujita Health University

Professional Experience

1996-1998	Resident, Fujita Health University Hospital
1998-1999	Surgeon, Tokyo Saiseikai Central Hospital
1999-2000	Surgeon, Ashikaga Red Cross Hospital
2004-2005	Assistant Professor, School of Medicine, Fujita Health University
2005-2006	Assistant Professor, School of Medicine, Fujita Health University
2006-2007	Study Abroad (Imperial College London, Edinburgh Western General Hospital)
2007-2008	Assistant Professor, School of Medicine, Fujita Health University
2008-2013	Lecturer, School of Medicine, Fujita Health University
2013-2015	Lecturer, School of Medicine, Fujita Health University
2015-2016	Clinical Associate Professor, School of Medicine, Fujita Health University
2016-2020	Associate Professor, School of Medicine, Fujita Health University
2020-2022	Associate Professor of Surgery, Okazaki Medical Center, Fujita Health University
2022-Present	Professor of Surgery, Okazaki Medical Center, Fujita Health University

Experience with the new robotic technology in colorectal surgery: Hinotori' System

Hidetoshi KATSUNO

Fujita Health University, Okazaki Medical Center, Japan

Background

The development of robot-assisted surgery for colorectal cancer marks a significant advancement in the field of surgical oncology. Over the past decade, the adoption of robotic technologies, particularly the da Vinci Surgical System™, has markedly transformed minimally invasive surgeries, offering enhanced precision, dexterity, and visualization. These advancements have contributed to improved clinical outcomes. However, with the expiration of key patents, the surgical robotics landscape is evolving, with novel systems entering the market. The hinotori™ Surgical Robot System (hinotori), developed by Medicaroid Corporation in Japan and approved for clinical use in 2020. This study demonstrates our initial experiences and surgical outcomes using the hinotori for colorectal surgeries.

Methods

We retrospectively reviewed 85 patients who underwent colorectal surgery with the hinotori from November 2022 to July 2024 at our institution. The study included patients with rectal neoplasms (42 cases) and colon cancers (43 cases). Port placements and instrument maneuvers follow the protocols established for da Vinci surgeries. The double bipolar method (DBM), utilizing Maryland bipolar forceps and fenestrated bipolar forceps for precise dissection and hemostasis, was employed, depending on the situation. A prospective colorectal database, containing clinical information on patient characteristics, preoperative assessments, surgical outcomes (including postoperative complications), and pathological outcomes was used for the analysis.

Results

For rectal cases, the median age was 63 years (range 48-87) with a gender distribution of 22 males and 20 females. The median BMI was 22.8 (range 16.5-32.0). Clinical stages were distributed as follows: 13 patients in stage I, 6 in stage II, 19 in stage III, and 4 in stage IV. The distance between the tumor and the anal verge was 8 cm. Surgical procedures included anterior resection in 38 cases, intersphincteric resection in 3 cases, and abdominoperineal resection in 1 case, with lateral lymph node dissection performed in 2 cases. The median operative time was 264 minutes (range 167-584), and the cockpit time was 155 minutes (range 79-472). The blood loss was 16 ml (range 3-114), with no patients requiring blood transfusions. Pathologically, all cases had negative distal and radial margins. The number of lymph nodes retrieved was 20 (range 7-59). Postoperative complications included ileus in 3 cases and anastomotic leakage in 1 case. The postoperative hospital stay was 11 days (range 8-51), with no reoperations or readmissions within 30 days post-surgery.

For colon cases, the median age was 72 years (range 38-85) with 24 males and 19 females. The median BMI was 22.6 (range 16.2-28.6). Clinical stages were as follows: 19 patients in stage I, 10 in stage II, 12 in stage III, and 2 in stage IV. Surgical procedures included ileocecal resection in 11 cases, right hemicolectomy in 10 cases, transverse colectomy in 1 case, left hemicolectomy in 8 cases, and sigmoidectomy in 13 cases. The median operative time was 233 minutes (range 158-414), and the median cockpit time was 137 minutes (range 70-273). The median blood loss was 15 ml (range 2-130). All patients had negative proximal, distal, and radial margins in the pathological exam. The number of lymph nodes retrieved was 25 (range 6-67). Postoperative complications included ileus in 2 cases and surgical site infections (SSI) in 2 cases. The median postoperative hospital stay was 10 days (range 7-39).

Conclusions

The hinotori demonstrates safety and feasibility in Japanese patents with colorectal cancer when performed by experienced robotic surgeons. The DBM technique facilitated effective dissection and hemostasis, contributing to minimal blood loss and favorable short-term outcomes. Our findings support the potential of the hinotori system in expanding the capabilities of robotic-assisted colorectal surgery.

Jung Hoon BAE

The Catholic University of Korea, Korea

Education

2010	M.D., Graduated from The Catholic University of Korea
2022	Ph.D., Graduated from The Catholic University of Korea

Professional Experience

2010-2011	**Intern** Seoul St. Mary's hospital, College of Medicine, The catholic Univ. of Korea
2011-2015	**Resident** Department of Surgery, Seoul St. Mary's hospital, College of Medicine, The catholic Univ. of Korea
2015-2018	**Medical Officer in Korea Navy** Daejeon Military Hospital, Dok-do Ship
2018-2021	**Clinical Fellow** Division of Colorectal Surgery, Department of Surgery, Seoul St. Mary's Hospital, College of Medicine, The catholic Univ. of Korea
2021-	**Clinical Assistant Professor** Division of Colorectal Surgery, Department of Surgery, Seoul St. Mary's Hospital, College of Medicine, The catholic Univ. of Korea

Mamoru UEMURA

Osaka university, Japan

Education

1995-2001	School of Medicine, Osaka University, Osaka, Japan (M.D. degree)
2001-2002	Residency in Surgery, Osaka University Hospital, Osaka, Japan
2002-2005	Residency in Surgery, Osaka International Cance Institute, Osaka, Japan
2006-2010	Graduate School of Medicine, Osaka University, Osaka, Japan (Ph.D. degree in Gastroenterological Surgery (2010))
2010-2012	Postdoctoral research fellow, The Johns Hopkins University, School of Medicine,USA

Professional Experience

2012-2015	Assistant Professor, Department of Gastroenterological Surgery, Graduate School of Medicine, Osaka University, Japan
2015-2019	Attending surgeon, Department of Surgery, National Hospital Organization, Osaka National Hospital, Japan
2019-2019	Assistant Professor, Department of Gastroenterological Surgery, Graduate School of Medicine, Osaka University, Japan
2020-present	Associate Professor, Department of Gastroenterological Surgery, Graduate School of Medicine, Osaka University, Japan
2022~	Chief of Lower Gastrointestinal Surgery, Deputy Chief of Gastroenterological Surgery

Extracorporeal versus Intracorporeal anastomosis in Minimal Invasive Colon Surgery: What is different?

Mamoru UEMURA

Osaka university, Japan

Background

Intracorporeal anastomosis (IA) in colectomy is expected to contribute to earlier postoperative recovery by reducing the extent of gastrointestinal mobilization compared to extracorporeal anastomosis. With advancements in surgical devices, IA has become safer and more reliable, leading to an increase in its adoption in medical facilities across Japan. Several techniques exist for IA, including the overlap method, delta-shaped anastomosis, and functional end-to-end anastomosis, each with its own advantages and disadvantages. We primarily use the overlap and delta-shaped methods, with the overlap method as our standard approach.

In IA for colorectal cancer, the overlap method allows for the creation of a wide anastomotic site parallel to the bowel on the mesenteric side, making it less challenging even in obese patients. However, this method is complex and time-consuming due to the need for suturing to close the insertion site. From an oncological perspective, it is desirable to promptly complete the closure of the bowel ends. To address the challenges of the overlap method, we have developed and implemented a sutureless overlap method that relies solely on an automatic suturing device. This presentation will demonstrate the technique and discuss the clinical outcomes.

Methods

This study included 73 patients who underwent IA at our department from March 2021 to March 2024 (excluding cases registered in other clinical trials). We have practiced the delta -shaped method, the standard overlap method involving hand-sewing, and the sutureless overlap method, evolving our techniques over time. In the sutureless overlap method, small openings were created 2 cm from the small bowel stump and 8 cm from the colon stump, followed by a side-to-side anastomosis using a 60mm linear cartridge. The stump of the insertion hole was lifted, and full-thickness closure was achieved with a 60mm cartridge.

Results

The median age of the 73 patients was 72 years, with a gender distribution of 32 males and 41 females, and a median BMI of 22.9. The lesion locations were V/C/A/T/D: 1/23/29/15/5 cases, with clinical stages I/II/III/IV: 41/13/13/6 cases. The breakdown of anastomosis methods was delta-shaped in 34 cases, standard overlap in 8 cases, and sutureless overlap in 30 cases. The median anastomosis time was 12/33.5/15 minutes, with the standard overlap method being significantly longer than the other two methods ($P<0.001$ for each comparison), while no significant difference was observed between the delta and sutureless overlap methods ($P=0.2262$). The median operative time and blood loss were 250/266/237 minutes and 10/15/0 ml, respectively. Grade III or higher postoperative complications included one case of ileus in both the delta and sutureless overlap groups. Regarding prognosis, the 12-month

relapse-free survival (12M-RFS) was 95.8% for Delta, and 100% for both Standard overlap and sutureless overlap methods, with no peritoneal recurrences observed.

Conclusion

The sutureless overlap method has the potential to shorten operative time and has shown acceptable oncological outcomes. Continued careful follow-up is necessary in the future.

Jung Wook HUH

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Education

1992-1998	M.D., Yonsei University School of Medicine
2006-2008	M.S., Yonsei University School of Medicine
2008-2011	Ph.D., Chonnam National University Medical School

Professional Experience

2008-2013	Assistant Professor, Department of Surgery, Chonnam National University Hwasun Hospital
2013-2019	Associate Professor, Department of Surgery, Samsung Medical Center
2019-Present	Professor, Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine

Articulating instruments in laparoscopy: Leveling the field with robotic surgery

Jung Wook HUH

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Robotic surgical systems are well known for features such as ergonomic manipulation, a stable camera command, and articulation. The increased accessibility and manipulation of tissue provided by an articulating instrument has been suggested to enhance surgical precision. Furthermore, some retrospective studies that compared robotic surgery to standard laparoscopy reported improved clinical outcome in favor of robotics in rectal cancer surgery. ARTISENTIAL®, an articulating laparoscopic instruments, featuring a multi-degree-of-freedom level of dexterity and a 360-degree wristed capability of the end effector, similar to that known from surgical robotic systems. I would like to address the current status and results comparing surgical outcomes between robotics and laparoscopy using articulating devices.

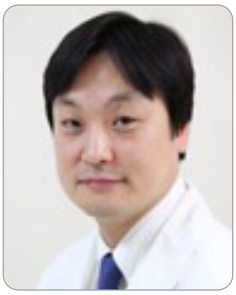
KOR Room 4

[KQIPS Workshop]
Practical Steps for Improving Surgical Quality and Better Outcomes

Chairs

Kang Young LEE Yonsei University, Korea

Sun Jin PARK Kyung Hee University, Korea



In Woong HAN

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Education

1996-2002	M.D., Seoul National University College of Medicine
2011-2013	M.S., Seoul National University College of Medicine
2013-2018	PhD., Seoul National University College of Medicine

Professional Experience

2012-2016	Assistant professor, Department of Surgery, Dongguk University Ilsan Hospital
2016-2018	Assistant professor, Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine
2019-2020	Visiting Scholarship, Moores Cancer Center, UC San Diego
2018- 2024	Associate professor, Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine
2021-Present	Chief, Division of Hepatobiliary and Pancreatic Surgery, Samsung Medical Center
2024-Present	Professor, Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine

The Current Status of K-QIPS

In Woong HAN

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Improvements in surgical quality and patient safety are critical components of the healthcare system. Despite excellent cancer survival rates in Korea, there is a lack of standardized postoperative complication management systems. To address this gap, the Korean Surgical Society (KSS) and the Korea Surgical Research Foundation (KSRF), in collaboration with the Ministry of Health and Welfare and the Korea Health Industry Development Institute initiated the development of the Korean Quality Improvement Platform in Surgery (K-QIPS) program. In this year, as 2nd of this project, K-QIPS was successfully launched in 87 general hospitals, and established a postoperative common and surgery-specific complication big data platform aimed at improving medical quality in the surgical field. The program covers five major surgical fields: gastric surgery, colorectal surgery, hepatectomy and liver transplantation, pancreatectomy, and kidney transplantation.After that, this program will be working toward the implementation of an AI-based complication prediction system and the provision of evidence-based feedback to participating institutions. K-QIPS represents a significant step toward improving surgical quality and patient safety in Korea. As a result, we hope that this program can reduce postoperative complications, mortality, and medical costs by providing a standardized platform for complication management and prediction. The successful implementation of this nationwide project could provide a good model for other countries that are required to improve surgical outcomes and patient care.

Ji Won PARK

Seoul National University Hospital, Korea

Education

1995-2001	Seoul National University College of Medicine
2006-2008	Graduate School of Medicine, Chungbuk National University, Master's Degree
2009-2019	Graduate School of Medicine, Chungbuk National University, Doctoral Degree

Professional Experience

2008-2013	Attending Surgeon, National Cancer Center, Korea
2013-2017	Assistant Professor, Seoul National University Hospital
2017-2022	Associate Professor, Seoul National University Hospital
2019-2020	Visiting Scholar, University of Pennsylvania
2022-present	Professor, Seoul National University Hospital

Hye Rim SEO

The Korean Surgical Research Foundation, Korea

Education

2006-2010	KEIMYUNG UNIVERSITY

Professional Experience

2014-2016	Yonsei university SEVERANCE HOSPITAL, Department of Gastroenterology nurse
2016-2018	Samsung medical center, partment of Gastroenterology Elecronic Medical Record PA
2019-2021	The Catholic University of Korea, Seoul St. Mary's Hospital
2021-2023	The Catholic University of Korea, Seoul ST.MARY'S Hospital Clinical Research Coordinator, Department of Gastroenterology
Present	The Korean Surgical Research Foundation Clinical support Team Leader

Hurdles for Data Collection

Hye Rim SEO

The Korean Surgical Research Foundation, Korea

Introduction

• The presentation will focus on the importance of data collection in the K-QIPS project, discussing the major challenges that may arise during the data collection process, as well as potential solutions.

Main

1. Challenges in the Data Collection Process: Conducting DRB
   - o When conducting retrospective research without obtaining consent from participants, it is crucial to ensure the protection of personal information.
   - o Researchers must adhere to strict data protection regulations and apply data anonymization techniques.
2. Data Quality Management
   - o A standardized data collection process is necessary.
   - o Regular data quality audits should be conducted.
   - o Continuous education for data entry and review personnel (SCR) is essential.
3. Data Accessibility and Security
   - o Establish protocols and improve IT infrastructure to address security issues related to collected data.
   - o Integrate data from various formats.

Conclusion

• The presentation will summarize the challenges and solutions related to data collection, emphasizing the need for continuous efforts to improve the data collection process.

Woong Bae JI
Korea University, Korea

Education

1998-2004	Korea University College of Medicine, Seoul, Korea
2006-2008	Korea University, Graduate School, Majored in Surgery Received, Master of Medical Science
2009-2013	Korea University, Graduate School, Majored in Surgery Received, Doctorate Degree of Medical Science

Professional Experience

2015-2015	Clinical Observation Program, Department of Surgery, Tokyo Metropolitan Cancer and Infectious Disease Center, Komagome Hospital, Japan (Korea University VISION 2020 grant)
2015-2015	Clinical Observation Program, Department of Surgery, Erlangen University Hospital, Germany (Korea University VISION 2020 grant)
2014-2018	Clinical Assistant Professor, Division of Colon and Rectal Surgery, Korea University Ansan Hospital, Ansan
2018-2023	Associate Professor, Division of Colon and Rectal Surgery, Korea University Ansan Hospital, Ansan
2023-Present	Professor, Division of Colon and Rectal Surgery, Korea University Ansan Hospital, Ansan

Audit: How to Ensure Data Reliability

Woong Bae JI

Korea University, Korea

The audit plan for the Korean Quality Improvement Platform in Surgery (K-QIPS) project is meticulously designed to ensure the integrity, reliability, and compliance of the research data generated during the study. This project focuses on building a comprehensive big data platform and developing an AI-based Clinical Decision Support System (CDSS) aimed at predicting post-surgical complications. Given the high stakes involved in clinical research, particularly in a domain as critical as post-operative care, this audit plan serves as a foundational tool to safeguard the quality of the research process.

The audit will be conducted by the Data Management Committee of the Korean Surgical Research Foundation. This committee is responsible for overseeing the proper execution of the K-QIPS project, ensuring that all activities are in line with regulatory requirements and internal protocols. The audit's primary goal is to verify the accuracy and consistency of the collected data, thereby upholding the research's scientific validity. This will be achieved through a series of carefully planned activities, including on-site visits, data verification, and the evaluation of compliance with ethical standards and guidelines.

The audit process is structured into several key phases. Initially, an audit team is formed, consisting of qualified personnel from the Data Management Committee, who possess the necessary expertise and independence to carry out the audit. The team will perform audits at selected sites based on criteria such as data entry rates and the volume of cases handled by the site. Each audit involves a thorough review of the site's adherence to the approved research protocol, the accuracy of data entries in the electronic case report forms (eCRFs), and compliance with relevant laws, including those pertaining to bioethics and personal data protection.

The audit schedule is designed to align with critical milestones of the K-QIPS project, ensuring that audits are conducted before major data locks and at key points where significant data collection activities have occurred. This includes initial audits to establish baseline compliance, followed by subsequent audits to assess ongoing adherence to protocols. The findings from these audits will be categorized into major, minor, and recommendation findings, with each type receiving appropriate follow-up. Major findings, which could significantly impact the study’s validity or patient safety, will

trigger immediate corrective actions.

Moreover, the audit plan includes a comprehensive procedure for documenting and reporting audit findings. Detailed audit reports will be prepared for each site, outlining any discrepancies or issues identified during the audit process. These reports will be reviewed by the Data Management Committee, and corrective actions will be implemented where necessary. The audit findings will also be used to refine and improve the overall management of the K-QIPS project, ensuring that the highest standards of research quality are maintained throughout the study.

In conclusion, this audit plan is a critical component of the K-QIPS project, playing a vital role in ensuring the credibility and reliability of the research. By systematically auditing the processes and data involved in the study, the plan aims to enhance the quality of the research outcomes, ultimately contributing to the advancement of surgical care through the development of a robust and trustworthy predictive system for post-surgical complications.

Room 1

Tetsuichiro Muto Oration

Chair

Kotaro MAEDA Shonan Keiiku Hospital, Japan

Soichiro ISHIHARA
The University of Tokyo, Japan

Education

1986-1992 MD, The University of Tokyo School of Medicine
1997-2001 PhD in Surgery, The University of Tokyo Graduate School of Medicine

Professional Experience

1992-1994 Resident in Surgery, The University of Tokyo Hospital
1994-1997 Fellow in Surgery, The University of Tokyo Hospital
2003-2008 Assistant Professor, Department of Surgical Oncology, The University of Tokyo
2008-2013 Lecturer, Department of Surgery, Teikyo University
2013-2017 Lecturer, Department of Surgical Oncology, The University of Tokyo
2017-2018 Professor, Digestive Surgery, International University of Health and Welfare
2018-present Professor, Department of Surgical Oncology, The University of Tokyo Graduate School of Medicine
2023-present Vice dean, Faculty of Medicine and Graduate School of Medicine, The University of Tokyo

Inflammatory bowel disease associated-intestinal cancer: Nationwide database study and guidelines in Japan

Soichiro ISHIHARA

The University of Tokyo, Japan

The number of patients with inflammatory bowel disease (IBD), ulcerative colitis (UC), and Crohn's disease (CD) is increasing worldwide, and it is known that patients with long-standing IBD carry a high risk of developing intestinal cancer. However, the number of patients with IBD-associated intestinal cancer is still small compared to that with sporadic colorectal cancer; thus, less is known about their clinical characteristics and treatment. Therefore, the Japanese Society for Cancer of the Colon and Rectum conducted a nationwide database study on IBD-associated intestinal cancer, and data from 1249 patients with UC-associated colorectal cancer and 320 patients with CD-associated intestinal cancer were obtained and analyzed. IBD-associated intestinal cancer is characterized by a young onset, a high proportion of poorly differentiated and mucinous carcinomas, and a poor prognosis compared to sporadic colorectal cancer. CD-associated intestinal cancer showed a much poorer overall survival than UC-associated colorectal cancer. Tumor location is characteristic; prevalence in the left-sided colon and rectum in UC and the lower rectum and anus in CD was observed. With recent advancements in treatment strategies, minimally invasive approaches, including robots, are increasingly being used in surgical treatment. The use of biologics was associated with a lower risk of advanced stages of IBD-associated intestinal cancer in UC, but not in CD. During the study period, patients treated in the latter period showed an improved overall survival than those treated in the former period. Our study group has recently published guidelines for the clinical practice of IBD-associated intestinal cancer, and an overview will also be presented.

Room 1

[ABSTRACT]
Free Paper 4 (Neoplasm)

Chairs

In Kyu LEE The Catholic University of Korea, Korea

Dong Hyun CHOI Hansarang Hospital, Korea

Mismatch repair protein expression pattern and clinical characteristics through universal tumor screening for Lynch syndrome

Kenji FUJIYOSHI, Satoshi SHIMAMURA, Tomoya SUDO, Hirona SHIGYOU, Maako KIKUCHI, Shigaki TAKAHIRO, Kenichi KOUSHI, Naohiro YOSHIDA, Takefumi YOSHIDA, Fumihiko FUJITA

Dept. Of Surgery, Kurume Univ, Japan

Background

Lynch syndrome (LS) is the most common hereditary tumor in colorectal cancer (CRC). Mismatch repair (MMR)- Immunohistochemistry (IHC) is widely used not only for screening for LS but also as a companion diagnosis for immune checkpoint therapy. We have been conducting universal tumor screening (UTS) for IHC by staining for four MMR proteins (MLH1, MSH2, MSH6, PMS2) in all resected colorectal cancer cases as a prospective study since 2017. In this presentation, we will discuss the clinical characteristics of MMR-IHC patterns.

Patients and Methods

Of the 1106 primary colorectal cancer surgery cases between January 2017 and December 2023, 878 cases with MMR-IHC were analyzed. MLH1-deficient cases were tested for BRAF mutation, while BRAF-mutant cases did not undergo genetic counseling as sporadic CRC. Pre-genetic counseling was conducted for all other dMMR cases to obtain a detailed family history. If the patient requested genetic testing (GT), GT was performed following genetic counseling (GC).

Results

CRCs with dMMR were 83 (9.5%). IHC expression patterns were divided into two groups: MLH1-PMS2 group (including MLH1 alone and PMS2 alone): 61 (73%) and MSH2-MSH6 group (including MSH2 alone and MSH6 alone): 20 (24%). MLH1-PMS2 group, compared to MSH2-MSH6 group, was associated with female, older, right-sided, negative CRC family history, and negative metachronous CRC. Among MLH1-PMS2 groups, 56% (29/51) were BRAF-wild. The overall GT rate was 37% (31/83); 35% (13/37) in MLH1-PMS2 and BRAF-wild group but 60% (12 of 20) in MSH2-MSH6 group. Two LS cases (15%=2/13) were diagnosed in MLH1-PMS2 group and nine cases (75%=9/12) in the M2M6 group.

Conclusion

The IHC pattern is crucial in diagnosing LS as it helps predict the responsible genes. For CRC with M2P6 deficient pattern, GC and GT are highly recommended.

Surgical approach to splenic flexure cancer: lymph node retrieval and other surgical outcomes in extended right hemicolectomy versus left hemicolectomy; a retrospective study.

Kabhisha GUNASEKARAN[1], MOHAMMED FAISAL BIN ABDUR RAHEEM[2], ANDREW COVENEY[3], RUPERT HODDER[3]

[1]General Surgery, Royal Perth Hospital, Australia

[2]General Surgery, St John Of God Midland Public Hospital, Australia

[3]General Surgery, Sir Charles Gairdner Hospital , Australia

Aim

This research is carried out to evaluate and compare the retrieval of lymph nodes and the surgical outcomes of extended right hemicolectomy (ERH) and left hemicolectomy (LH) as a surgical approach for splenic flexure tumours.

Methods

A retrospective study was conducted to compare the outcomes of ERH versus LH as surgical management of splenic flexure tumours. The main outcomes examined included the number of harvested lymph nodes, the occurrence of anastomotic leak, and bleeding risk. Secondary outcomes assessed included successful removal of all cancerous tissue (R0 resection), other postoperative complications such as wound infection, paralytic ileus, intra-abdominal abscesses, postoperative mortality, duration of hospitalization, 1-year survival rate and 1-year disease-free survival rate.

Results

An analysis of 70 patients treated at Sir Charles Gairdner Hospital (SCGH) revealed that ERH procedure resulted in a slightly higher number of harvested lymph nodes compared to LH. However, this difference was not found to be statistically significant (MD 3.5, 95% CI -0.6,7.6; P=0.094). There were no significant differences observed between the two surgical approaches in terms of ≥12 or <12 harvested lymph nodes, anastomotic leakage, bleeding risk, R0 resection, wound infection, paralytic ileus, intra-abdominal abscesses, postoperative mortality, the length of hospital stay, 1-year survival rate and 1-year disease-free survival rate.

Conclusion

According to the findings of this retrospective study, it appears that there is no significant difference between ERH and LH in terms of lymph node retrieval, surgical resection, postoperative complications, mortality, and survival rates. Nevertheless, to establish more conclusive results, randomized controlled trials are required.

Exploring Comparisons in Patients Undergoing Intersphincteric Resection for Rectal Cancer: Poorly Differentiated with Signet Ring Morphology versus Well/Moderately Differentiated Adenocarcinoma

Akash MOR, Sanjay SINGH, Avanish SAKLANI, Sanjay SINGH, Tejas VISPUTE, Yogesh BANSOD, Akash MOR, Ankit SHARMA, Mufaddal KAZI, Ashwin DESOUZA, Avanish SAKLANI

Colorectal & Robotic Surgery, Tata Memorial Centre, Mumbai, India, India

Background (Aims)

Poorly differentiated adenocarcinomas with signet ring morphology (PDAC Signet) in rectal cancer are associated with a grim prognosis. This study aims to compare the outcomes of patients diagnosed with PDAC Signet and well or moderately differentiated adenocarcinoma (WDAC/MDAC) who underwent Intersphincteric resection (ISR).

Methods

Prospective data of patients undergoing ISR at a tertiary cancer centre over a 10-year period were analysed. Among various histologies, patients having PDAC Signet histology and those with WDAC/MDAC were retrospectively analysed for outcomes and survival.

Results

Between March 2013 and December 2022, 382 patients underwent ISR. Among them, 76 were diagnosed with PDAC Signet and 306 with WDAC/MDAC. The PDAC Signet group had a higher proportion of males (83%), while the WDAC/MDAC group had higher proportion of females (35%) (p=0.002). Patients below 45 years of age were more prevalent in the PDAC Signet group (65.8%) (p<0.001). Pathological nodal positivity was higher in the PDAC Signet group (p<0.001). Margin positivity (circumferential and distal resection margin) did not differ significantly between the groups (p=0.98). Recurrence rates were substantially higher in the PDAC Signet compared to the WDAC/MDAC group (33% vs 14.7%, p<0.001). The median follow-up for both histologies combined was 47 months. Multivariate analysis revealed that the four-year disease-free survival (DFS) in the PDAC Signet group was significantly lower in terms of recurrence (HR=0.131, p<0.001), as was the overall survival (OS) (HR=0.286, p=0.023).

Conclusion

Patients diagnosed with PDAC Signet exhibit elevated rates of recurrence and poorer survival outcomes. It is imperative to thoroughly counsel patients about the unfavourable prognosis associated with PDAC Signet prior to considering ISR. Survival outcomes suggest that a considerable portion of these patients can achieve favourable outcomes with appropriate management.

Impact of Central Lymph Node Dissection with IMA High Ligation on Survival Outcomes in Laparoscopic Resection for Sigmoid Colon Cancer

Hyun Tae LIM, Seung Bum RYOO

Seoul National University Hospital, Korea

Methods

Retrospective analysis was conducted on 995 sigmoid colon cancer patients who underwent laparoscopic low anterior resection (LAR) or anterior resection (AR) and CLND with IMA high ligation between 2013-2023. Patients were categorized based on lymph node metastasis extent: no metastasis (n=599), peritumoral/pericolic metastasis (n=352), and central metastasis (n=44). Clinicopathologic factors, tumor characteristics were recorded and CLNM was confirmed via histopathological examination. Oncologic outcomes, including overall survival (OS), disease-free survival (DFS) was analyzed in relation to lymph node metastasis location.

Results

44 (4.4%) had CLNM. Median follow-up period was 47.9 (0.3-131.7) months. 5-year OS rates were 99.7% for no metastasis, 87.0% for peritumoral/pericolic metastasis, and 79.7% for central metastasis (p=0.002). 5-year DFS rates were 97.8% for no metastasis, 90.9% for peritumoral/pericolic metastasis, and 85.1% for central metastasis (p<0.001). Multivariate analysis identified CLNM as a predictor of poor OS (HR 2.6, 95% CI 1.1-6.2, p=0.029) and DFS (HR 2.6, 95% CI 1.2-5.3, p=0.011). Presence of pathologic lymphatic invasion was associated with significantly worse DFS (HR 1.6, 95% CI 1.1-2.4, p=0.018)

Conclusions

CLNM in sigmoid colon cancer patients undergoing laparoscopic resection with IMA high ligation is associated with significantly worse oncologic outcomes. Higher rates of CLNM were found in patients with preoperative CEA values>5; higher clinical T, N stage; and poorly differentiated adenocarcinomas. These findings underscore the importance of meticulous surgical techniques and the potential need for tailored surgery to improve survival outcomes in this subset of patients.

Quasi-randomized controlled trial for comparing outcomes of patients and surgeon using articulating laparoscopic instruments (Artisential®) in TME during LAR.

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Introduction

Despite surgeons' expertise, navigating narrow pelvic cavity during TME always poses inevitable difficulties. Although anatomical limitation of approaching pelvis using conventional straight laparoscopic instruments can largely be overcome in robotic systems, not all patients or surgeons can access robotic surgical systems. Articulating laparoscopic instruments, under the commercial name 'Artisential' were developed to essentially work as a bridge between laparoscopy and robot. In this study, we aimed to directly compare these three methods in TME during LAR; straight laparoscopic (lapa-S), articulating laparoscopic (lapa-A), and robotic instruments.

Methods

Between 2021 and 2023, we prospectively enrolled adult patients undergoing curative MIS LARs. Due to issues of insurance coverage, decision to perform robotic surgery over laparoscopy could not be randomized, but we performed 1:1 randomization between lapa-S and lapa-A. There were 40 patients enrolled in each group. We designed to simultaneously measure the heart rate and stress level of surgeon using wearable device to assess emotional stress and physical fatigue.

Results

Baseline characteristics such as age, sex, BMI, ASA class were comparable between the three groups and there was no significant difference in surgical outcomes (i.e. EBL, op time, rate of diverting stoma, conversion, recovery. Upon comparing serial stress levels before/during/after TME in each group, the levels were measured the highest in lapa-S group, especially preoperatively, but became similar postoperatively. As for heart rates, similar patterns were seen for all groups, except that robotic surgery tended to show lower heart rates than both lapa-S and lapa-A.

Discussion and conclusion

From this study, we once again confirmed that articulating laparoscopic instruments are safe and feasible option working as bridge between conventional laparoscopy and robot. Additionally, we demonstrated that mental and physical burden may be reduced for surgeons using lapa-A due to its allowance for better access and visualization of pelvic cavity. Furthermore, articulating instruments showed similar hospital fees as conventional laparoscopic method, proving that they can be cost-effective choice for LARs.

Protective Effect of Total Circumferential Reinforcement Sutures for Anastomotic Leakage after Minimally Invasive Surgery for Rectal Cancer

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Background

Anastomotic leakage (AL) remains a serious problem in patients undergoing rectal cancer surgery. Various methods have been suggested to prevent AL after double-stapled anastomosis in minimally invasive low anterior resection.

Objective

To investigate the protective effect of total circumferential reinforcement sutures (TCRS) for anastomotic leakage after laparoscopic or robot-assisted low anterior resection for rectal cancer.

Main Outcome Measures

This retrospective single-institution study consisted of 541 consecutive patients who underwent minimally invasive low anterior resection with double-stapling anastomosis for primary rectal cancer between January 2014 and August 2023. Patients with obstructive rectal cancer requiring emergency surgery, protective ileostomy, Hartmann procedure, abdominoperineal resection, and hand-sewn coloanal anastomosis were excluded from the study. Data for patients who received circumferential reinforcement sutures were compared with those who did not. Patient-, tumor-, and surgery-related variables were collected and examined using univariate and multivariate analyses.

Results

The overall incidence of anastomotic leakage was 3.9% (21/541). Patients who received total circumferential reinforcement sutures had a significantly lower anastomotic leak rate (1.6% vs. 7.3%, $p<0.002$) and were more likely to undergo surgery on the robotic platform compared to those who did not. No other significant correlations were observed between clinical factors and the use of TCRS. Multivariate analysis indicated that male patients ($p=0.03$, OR 4.22), TCRS omission ($p=0.02$, OR 3.25), and an anastomosis level less than 5 cm ($p<0.001$, OR 6.17) were independently associated with anastomotic leakage. Patients with 0, 1, 2, or 3 of these risk factors had observed leakage rates of 0%, 1.6%, 3.4%, and 45.8% ($p<0.001$), respectively.

Conclusion

TCRS may reduce the incidence of anastomotic leakage after minimally invasive low anterior resection of rectal cancer, particularly for patients with multiple risk factors.

Room 2

[ABSTRACT]
Free Paper 5 (Pelvic floor)

Chairs

Duk-Hoon PARK Seoul Songdo Hospital, Korea

Dong Min KWAK Koo Hospital, Korea

A case of low rectovaginal fistula of obstetric origin: treatment by fistulotomy and reconstitution.

Elroy WELEDJI

Faculty of Health Sciences, University of Buea, Cameroon

Background (Aim)

An individualized systematic approach to rectovaginal fistulas based on their size, location and etiology provides a more concise treatment plan. The aim was to present a case of a low rectovaginal fistula of obstetric origin in a low resource setting managed by a fistulotomy and reconstitution and give arguments for this approach.

Method

A case report of a 35-year-old African woman with a 1-year history of fecal drainage through the vagina following the passage of soft stool but no frank incontinence. She had an unrecognized injury from forceps vaginal delivery and a repaired perineal tear 5 years previously. This was managed successfully by a fistulotomy in which the bridge of skin and scar tissue was divided, and the defect repaired in a layered closure as in a classical third-degree perineal laceration.

Results

The arguments for this mode of treatment are (1) many small low rectovaginal fistulas are incompletely healed third degree perineal lacerations involving the sphincters, (2) it would properly deal with an unintact anal sphincter complex which usually coexists in obstetric trauma, (3) many of these patients have a coexistent or occult sphincter injury and the symptoms of rectovaginal fistula may mask faecal incontinence (4) no fear of the inherent division of the sphincter with unknown rate of subsequent incontinence as the sphincter muscle being the most vascular tissue between the rectum and vagina favours local repair, (6) no risk of an anastomotic breakdown as in advancement flaps, (7) not all the anal sphincter is cut and no need for lateral exploration with the risk of damaging the neurovascular bundles, (8) small studies have demonstrated 100% success rate

Conclusion

A fistulotomy and immediate composite repair for low rectovaginal fistula may be advantageous and acceptable in a low resource setting where endoanal imaging and manometry

LARS scores vs POLARS, a fight or a dilemma?

Michail Klimovskij[1], Charlotte Florance[1], Narimantas Samalavcius[2], Joseph Nunoo-Mensah[3], Emre Balik[4], Richard Fortunato[5], James Mccormick[6], Julio Castillo[7], Tahsin Colak[8], Vitalii Groshilin[9], Audrius Dulskas[10]

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[10] Surgery, National Cancer Institiute, Lithuania

Background

Surgery on a rectum with low or ultra-low anastomosis is becoming a standard with advances of laparoscopic or robotic surgery. As a downside it is not uncommon that the function is affected causing low anterior resection syndrome (LARS) postoperatively.

Aim: Aim of this study was to collect the data of patients undergoing rectal resections and to compare it using predictive preoperative LARS – POLARS scores.

Methods

Multicentre study with patients undergoing rectal resections was conducted. Function assessed preoperatively and 6 months after the surgery. Patients filled LARS questionnaires preop and 6 months after the operation. POLARS score was calculated via online tool using patients' data. Results were compared using statistical methods.

Results

8 centres with 287 patients were enrolled. 87 of them had sufficient data collected suitable for further interpretation. Interestingly, median postoperative LARS and POLARS scores came back as 27. However, 28% of patients had significant differences in scores, with POLARS towards overpredicting the poorer bowel function compared to 6 months LARS results. On the other hand, 47% of patients had significant changes in LARS score evaluating LARS questionnaires (difference in values >10); 34% towards poorer bowel function, 12% function has improved.

Conclusions

Third of patients undergoing rectal resections in the study developed significant LARS postoperatively. Within the limitations of the sample size and study design, both methods showed equal median values with POLARS overpredicting poorer function comparing to LARS real time assessment. Improvement of LARS score post-surgery is likely associated with tumour related severe symptoms preoperatively.

Laser Hemorrhoidoplasty versus LigaSure Hemorrhoidectomy: Comperative Analysis of 1496 patients

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Background

Hemorrhoidal disease constitutes a prevalent health concern, posing significant challenges to established treatment paradigms. While surgical hemorrhoidectomy is frequently acknowledged as the benchmark procedure, the advent of innovative surgical approaches, including laser hemorrhoidoplasty and LigaSure hemorrhoidectomy, aims to mitigate the drawbacks associated with the conventional method, such as postoperative pain, hemorrhage, and protracted recovery periods. The objective of this study is to undertake a comparative analysis of the outcomes of laser hemorrhoidoplasty versus LigaSure hemorrhoidectomy among patients diagnosed with grade II-III hemorrhoidal disease.

Methods

This study employed a retrospective analysis methodology with a total of 1496 patients to evaluate a cohort of patients who received treatment through either laser hemorrhoidoplasty(884 patients) or LigaSure hemorrhoidectomy(612 patients). The collected data encompassed variables as postoperative pain levels, complication incidence, rates of recurrence, and duration before returning to work. The principal metric for comparison was postoperative pain between the two patient groups, quantified via the Visual Analog Scale (VAS).

Results

The analysis revealed that individuals undergoing laser hemorrhoidoplasty reported significantly reduced levels of postoperative pain in comparison to those treated with LigaSure hemorrhoidectomy. Additionally, intraoperative bleeding was found to be substantially lower within the laser treatment group. Nonetheless, a higher incidence of disease recurrence was observed in the laser group, registering at 5.2%(46), in contrast to 2.12%(13) within the LigaSure cohort. Recurrence was noted significantly in Grade III hemorrhoid subgroup. There was no statistically significant difference between groups in regard of Grade II hemorrhoids. Moreover, the interval before resuming work and routine activities was notably shorter following laser hemorrhoidoplasty than after LigaSure hemorrhoidectomy.

Conclusion

Laser hemorrhoidoplasty emerges as a minimally invasive therapeutic option that can be efficaciously deployed in patients with suitable grade II-III hemorrhoidal disease, providing advantages such as diminished postoperative pain, fewer complications, and expedited recovery times relative to LigaSure hemorrhoidectomy.

Is robotic-assisted ventral mesh rectopexy better than laparoscopy?

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Background/Aims

Minimally invasive ventral mesh rectopexy (VMR) for symptomatic rectal prolapse has gained preference due to its nerve-sparing approach demonstrating good functional outcomes and low recurrence rates. Whilst laparoscopic VMR (LVMR) has become popularized and is the familiar technique for most surgeons, this procedure is becoming increasingly applied with robotic-assistance (RVMR). The robot is well-suited as it enhances visualization and manoeuvrability to improve deep pelvis dissection and intracorporal suturing for mesh fixation onto the rectum. We hypothesize that this advantage translates into a shorter operative duration and thus faster recovery and lower postoperative costs in RMVR. We perform a prospective study to assess and compare the short-term outcomes and costs.

Methods

Eligible patients who underwent MIS VMR between 2021 to 2022 were recruited. The type of surgery (LVMR vs RVMR) was dependent on the consulting surgeon's expertise. The primary end-point was median length of stay (LOS). Secondary outcome measures include symptom improvement scores, surgery duration, post-operative complications, and cost-comparison. Patients were followed-up for a 1-year period.

Results:

Twenty female patients with a median age of 62.5 years were included. Four patients had LVMR, whilst sixteen patients underwent RVMR. RVMR had a significantly shorter median operating time (185 mins versus 372.5mins, $p<0.01$). RVMR patients also had a shorter median LOS (1 day versus 3.5 days, $p=0.35$), which resulted in a significantly lower ward accommodation cost of 63.4% decrease ($p=0.038$). There was no significant difference when comparing consumables costs [SGD$2556 (R) vs $2345 (L), $p=0.4$] and total inpatient hospitalization costs ($p=0.108$). There were no significant differences in clinical outcomes between both groups.

Conclusion

RVMR is a better alternative to LVMR with significantly shorter operating time and reduced length of stay, with no difference in costs or clinical outcomes.

Ten-year experience of surgery for external rectal prolapse: Outcomes and factors affecting disease recurrence

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Colorectal Surgery Unit, Department Of Surgery, Siriraj Hospital, Thailand

Aim

Despite several surgical procedures for external rectal prolapse (ERP), there is still lack of consensus regarding best operation. Choosing appropriate approach should be individually tailored. This study reported surgical outcomes for ERP and determined factors potentially affecting the disease recurrence.

Methods

A prospectively collected database of patients undergoing any operation for ERP from 2014 to 2023 in the largest university hospital in Thailand were reviewed.

Results

This study included 72 patients (86% female) with mean age of 71 years (range 27-90). Sixteen cases (22%) were referral recurrent disease. Thirty-one cases (43%) had abdominal approach: 19 (26%) laparoscopic ventral rectopexy and 12 suture rectopexy (17%). The others had perineal approach: 34 Altemeier's procedure (47%) and 7 Delorme's procedure (10%). Demographic data and preoperative parameters were not significantly different between abdominal approach and perineal approach except the latter was associated with higher ASA classification. Two patients with Altemeier's procedure had anastomosis leakage requiring reoperation whereas no serious complications were seen in the other procedures. Overall recurrence was detected in 25 patients (35%) during median follow-up period of 18 months. For 56 patients (78%) with index operation for ERP in our institute, recurrence rate was 5/15 (33%) in LVR, 8/27(30%) in Altemeier's procedure, 1/6(17%) in Delorme's procedure, and 0/8(0%) in suture rectopexy. Altemeier's procedure with additional levatorplasty significantly lowered recurrence rate from 84.6% to 9.5%, (p=0.031). Multivariate analysis of perineal approach revealed factors affecting recurrence were overt prolapse (OR 0.028), constipation (OR 0.037), fecal incontinence (OR 0.057), and high BMI (OR 0.066). However, no factor was significantly affected recurrence in abdominal approach.

Conclusion

Abdominal approach is safe and feasible even in elderly patients. Overt prolapse, fecal incontinence and constipation were associated with disease recurrence after perineal procedure. Altemeier's procedure in combination with levatorplasty could reduce recurrence.

The role of minimally invasive techniques in the surgery of low presacral cysts

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COLOPROCTOLOGY, MOSCOW CENTRAL CLINICAL HOSPITAL, Russia

Objective

To study perioperative and long-term results in patients with low presacral cysts who underwent surgical treatment with minimally invasive transabdominal surgery (MIS) and perineal approach (PA).

Materials and Methods

Our randomized clinical trial included 13 patients with presacral cysts whose upper pole is lower than the S4 level who underwent surgical treatment between 2017-2024 years. The first group included 6 patients (46,2%) with longitudinal incision (transperineal approach) with coccygectomy. In 7 cases (53,8%) we used transabdominal access: robotic DaVinci Si - 4, laparoscopy - 3.

Results

The average operation time in MIS group was 182,6 min, in PA group - 146,6 min. The time of passage of the first stool in MIS group is 2,7 days in PA group - 3,8 days. Intraoperative rectal wall damage occurs in 3 patients in MIS group (42,8%) and 3 patients in PA group (50%) with protective sigmoid ostomy formation. Postoperative complications rate (all of them wound infection) was 38,4%: 2 - PA group and 3 - in MIS group. The median postoperative hospital stay was 8,2 days in MIS group and 6,3 days in PA group. Long-term complications were in 2 patients (anorectal fistula and presacral sinus). Stoma reversal was made in 83,3%. The median time to stoma closure is 4,5 months.

Conclusion

The our results of treatment of low presacral cysts using minimally invasive transabdominal surgery and perineal approach have similar outcomes. Large studies are needed to verify the patient selection criteria for transperineal or transabdominal MIS.

Room 3

[ABSTRACT]
Free Paper 6 (IBD & Benign)

Chairs

Gyung Mo SON

Pusan National University Hospital, Korea

Kihwan SONG

Koo Hospital, Korea

Unusual Presentation of Obturator Hernia: A Case Report of Knee Pain Mimicking Musculoskeletal Condition

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[2]Department Of Surgery, Jeffrey Cheah Of School Of Medicine And Health Sciences, Monash University, Malaysia, Malaysia

Background

Obturator hernia, a rare subtype of hernia typically presents with vague symptoms that can mimic other medical conditions, often leading to delayed diagnosis and increased morbidity.

Method

We present a case of obturator hernia in a patient presenting with significant knee pain on escalating doses of opioids.

Results

A 67-year-old female with a known history of rheumatoid arthritis presents with worsening right knee pain over 3 days, associated with one-day history of abdominal pain and vomiting. She had similar presentation of pain that self-resolved with normal diagnostic studies for knee joint pathology. Physical examination revealed tenderness over the right knee joint with limited range of motion, and mild abdominal tenderness with no appreciable masses. Knee X-ray was normal. However, computed tomography scans clearly showed a small bowel loop herniating through the right obturator foramen, confirming the presence of an incarcerated obturator hernia. The patient underwent emergent laparoscopic trans-abdominal pre-peritoneal (TAPP) repair. Her knee pain significantly improved postoperatively, confirming the obturator hernia as the cause of her pain.

Discussion

Obturator hernia presenting with knee pain is exceedingly rare and can be easily misdiagnosed as musculoskeletal conditions. The intra-abdominal contents can impinge on the obturator nerve causing referred pain in the nerve's distribution.

Conclusion

This case serves as a reminder to healthcare providers to maintain a broad differential diagnosis and consider rare causes, even in the presence of seemingly straightforward clinical presentations, to prevent diagnostic delays and optimize patient outcomes.

The use of minimally invasive techniques in performing reversal of Hartmann's procedure in patients with complicated diverticulitis

Mariia CHICHERINA, Artem GONCHAROV

COLOPROCTOLOGY, MOSCOW CENTRAL CLINICAL HOSPITAL, Russia

Aim

To analyze intraoperative and early postoperative results of open and laparoscopic reversal of Hartmann's (HR) procedure in patients with diverticular disease.

Materials and Methods

Our study included 42 patients with Hartmann's procedure for complicated diverticulitis (18 of them laparoscopic and 24 - open access). 4 comorbid patients refused reversal of Hartmann's procedure. 38 patients underwent reversal of Hartmann's procedure: 26 laparoscopically (all initial laparoscopic HP and 8 open) and 12 using laparotomy access. Contradictions for minimally invasive approach were: laparostomy, large ventral hernia, midline intestinal fistula.

Results

The average operation time in the laparoscopic HR group was 199±47,1 min and in the open HR group was 229,6±39,5 min ($p < 0.05$). There were no intraoperative complications in both groups. There were no conversions when performing laparoscopic reversal of Hartmann's procedure. The median postoperative hospital stay in the laparoscopic HR group was 7,2±2,9 and in the open HR group 9,6±4,6 days ($p < 0.05$).

The postoperative complications rate in the minimally invasive HR group was 19,2% comparing 50% in the open HR group ($p = 0.51$) with overall incidence 28,9%. Anastomotic leakage occurred in one patient in the group of open HR.

Conclusion

Patients who underwent laparoscopic Hartmann's procedure have shorter operative time and postoperative hospital stay compared to open HR. Primary laparoscopic emergency surgery is the way to faster and safer stoma closure.

Simultaneous laparoscopic rectosigmoid and ileocecal resections for deep multifocal endometriosis. Technical features and perioperative results.

Artem GONCHAROV, Mariia CHICHERINA

Coloproctology, Moscow Central Clinical Hospital, Russia

Materials and Methods

A retrospective study included 83 patients with deep infiltrative endometriosis who underwent segmental bowel resection between 2016-2023 years. 29 patients (35%) had DIE of the right colon, appendix, ileum. 17 of them (59%) had previous surgery for endometriosis (two and more procedures - 9 (31%) patients). All surgeries performed laparoscopically by two teams (gynecologic & colorectal) with the standard placement of trocars for gynecological surgery. Two or more monitors are necessary. Rectal and ileocecal dissection was done using "holy plane" embryo-oriented approach, which makes it possible to free the organ from adhesions, preserve innervation and blood supply, which makes it possible to perform strictly necessary resection and form an anastomosis without tension. The specimen removed through a single mini access or transvaginally, intracorporeal sigmo-rectal and ileo-ascendo anastomosis was formed intracorporeally and extracorporeally.

Results

Simultaneous segmental colectomy and ileocecal resection with the formation of 2 anastomoses performed in 9 cases (10.8%). Segmental rectal resection with appendectomy or caecal stapled resection in 10 cases (12%). Ileocecal resection alone with rectal shaving in 6 cases (7.2%) and pelvic peritoneal focuses dissection in 4 cases (4.8%). Mean age 34.4±3.7 years. BMI 21.1±3.7 kg/m2. Preventive stoma was done in 1 case and reversed after 1,5 months. The average operation time was 271.4±96.7 min, estimated blood loss 141.1 ml (10-400 ml). Draine was used in 7 cases. The time of passage of the first stool is 3.5±1.1 days. There were no intraoperative complications. Early postoperative complications in 2 patients (2.4%): 1 - bleeding from the circular anastomosis stapler line, 1 - wound infection.

Conclusion

Simultaneous laparoscopic rectosigmoid and ileocecal resections for deep multifocal endometriosis are safe and feasible with two-team multidisciplinary approach in the expert center.

The Incidence and Characteristics of Gastrointestinal Cancer in Patients with Inflammatory Bowel Disease in Korea; A Nationwide Population-based Study

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Background

The clinical characteristics of inflammatory bowel disease (IBD) in Koreans may differ from those in Western populations, suggesting that the characteristics of gastrointestinal (GI) cancers due to IBD might also differ. Therefore, we aimed to investigate the incidence and characteristics of GI cancers in Korean IBD patients.

Materials and Method

Using the national database of the Korean Health Insurance Review and Assessment Service, we analyzed data from patients diagnosed with ulcerative colitis (UC) and Crohn's disease (CD) from 2005 to 2017. We investigated the incidence of GI cancers in IBD patients and examined the risk factors for GI cancers as well as the time from initial IBD diagnosis to the development of GI cancer.

Results

The cohort included 48,689 UC patients and 20,725 CD patients. GI cancer occurred in 6,187 patients (8.91%), with a significantly higher frequency in UC (4,496 patients, 9.23%) compared to CD (1,691 patients, 8.16%) ($p<0.001$). GI cancer was most common in the 40-59 age group for UC patients (n=1,814, 40.3%) and in the 20-49 age group for CD patients (n=639, 37.8%). Colorectal cancer comprised the majority of GI cancers in both UC (n=4,413, 9.06%) and CD (n=1,599, 7.72%). Colorectal cancer was more frequent in males with UC (9.4% vs. 8.7%, $p=0.007$) and in females with CD (8.2% vs. 7.5%, $p=0.045$). Risk factors for GI cancer in IBD patients included age, low income, and rural residence. The median time from initial IBD diagnosis to GI cancer development was 1,313 days (range, 6 - 3,599 days) for UC and 1,258 days (range, 7 - 3,540 days) for CD.

Conclusion

In Korean IBD patients, GI cancers were primarily observed in younger individuals under the age of 60. Colorectal cancer was more frequent in males with UC

Efficacy of prophylactic antibiotics in Crohn's disease patients: Korean IBD study group

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Background/Aim

The surgical site infection (SSI) rate in Crohn's disease (CD) surgery is reported to be approximately 10-37%, which is relatively higher compared to colon cancer surgery and colonic diverticulitis surgery. This study aimed to evaluate the impact of PA on incidence of SSI and to identify risk factors for SSIs in CD abdominal surgery.

Methods

This retrospective, multi-center, observational study was conducted by analyzing the medical records of patients who underwent intestinal surgery for CD at seven hospitals belonging to the Korea inflammatory bowel disease study group between January 2013 and January 2024. The study cohorts were divided into two groups: those who used prophylactic antibiotics for several days after surgery (Conventional antibiotics group, CA group) and those who ended antibiotics within 24 hours after surgery (Just Prophylactic antibiotics group, PA group).

Results

We identified 412 patients in CA group and 63 patients in PA group. The PA group was older age at operation time (38 years vs. 32 years, P = 0.002) and more body mass index (20.25 kg/mm2 vs. 19.05 kg/mm2, P = 0.016) than the CA group. The PA group had lesser penetrating disease for operation indication (33.3% vs. 55.3%, P = 0.001) and lesser emergent operation (3.2% vs. 12.1%, P = 0.001). In terms of operative outcomes, there were no difference in the overall complication rate (PA: 17.5% vs. CA: 26.7%, P = 0.282) and infectious complication rate (PA: 11.1% vs. CA: 15.0%, P = 0.564) between two groups. In multivariate analysis, use of prophylactic antibiotics surgery was not protective factor for infectious complication (P = 0.571).

Conclusion

Discontinuing prophylactic antibiotics within 24 hours after CD surgery does not significantly impact the incidence of infectious complications. Furthermore, we plan to conduct additional analyzes such as propensity score matching based on this data.

Real-Time Predictive Modelling for Effective Management of Inflammatory Bowel Disease in Indonesian Healthcare Settings

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Inflammatory Bowel Disease (IBD) significantly impacts the quality of life for many patients in Indonesia, where healthcare systems often struggle with delayed diagnoses and inconsistent treatment protocols. Traditional reactive management methods can lead to suboptimal outcomes, emphasizing the need for more proactive approaches. This study aims to explore the potential of real-time predictive modeling in enhancing the management of IBD within Indonesian healthcare settings. By leveraging advanced machine learning techniques and comprehensive patient data, the study seeks to reduce disease flare-ups and improve overall patient outcomes. The study involved the collection of extensive patient data, including clinical symptoms, laboratory results, and genetic information, from various healthcare facilities across Indonesia. Advanced machine learning algorithms were employed to analyze this data and develop predictive models capable of forecasting disease flare-ups and progression. These models were then integrated into a real-time monitoring system designed to provide continuous patient assessment and personalized treatment recommendations. The system was tested in multiple Indonesian healthcare facilities, with adjustments made to address local data integration challenges and infrastructure limitations. The implementation of real-time predictive modeling showed significant improvements in IBD management. Personalized treatment recommendations improved treatment adherence and overall patient outcomes. Healthcare providers found the system user-friendly, enhancing their ability to manage IBD effectively with real-time updates and al!erts. Patients reported higher satisfaction with their care due to improved communication and more tailored treatment plans. Comparative analysis revealed a marked improvement in disease control and a reduction in healthcare resource utilization, including fewer emergency care needs and hospital admissions. Real-time predictive modeling offers a transformative approach to managing IBD in Indonesian healthcare settings. By addressing the inefficiencies of traditional methods, these advanced computational techniques ensure more efficient and fair organ allocation, ultimately saving more lives.

KOR Room 4

[KQIPS Workshop]
KQIPS Workshop for Colorectal Surgeons (Investigators) and Surgical Clinical Reviewers – How to Submit a New Subscription Application?

Chairs

Jeonghyun KANG Yonsei University, Korea

Ji Won PARK Seoul National University Hospital, Korea

Sun Jin PARK

Kyung Hee University, Korea

Education

1998	M.D. degree from Kyung Hee University College of Medicine, Seoul, Korea
2008	Master degree from Kyung Hee University, Graduate School, Seoul, Korea
2010	Ph.D. degree from Kyung Hee University, Graduate School, Seoul, Korea

Professional Experience

1998- 2003	Internship and Residency in General Surgery, Kyung Hee University Hospital
2003-2006	Military Service (Public Health Service)
2006-2009	Fellow and Clinical Assistant Professor, Kyung Hee University Hospital
2010-2015	Assistant Professor, Department of Surgery, Kyung Hee University Hospital
2015-2020	Associate Professor, Department of Surgery, Kyung Hee University Hospital
2020-	Professor, Department of Surgery, Kyung Hee University Hospital

K-QIPS: How to Submit a New Subscription Application?

Sun Jin PARK

Kyung Hee University, Korea

한국형 의료 질 향상 프로젝트의 대장직장 수술 분야 프로그램의 목표는 대장 직장 수술의 질 향상을 통한 합병증 및 사망률, 의료 비용 감소로 국민 건강과 대한민국 보건의료산업 발전에 기여하는 것으로 (1) 수술 후 합병증 예측 프로그램으로 환자의 합병증 발생 위험을 미리 인지하여 합병증 예방에 도움을 주고, (2) 수술 합병증 발생 저하를 통하여 수술 후 사망률, 주요 합병률을 줄이고 동시에 의료비 절감에 기여하며, (3) 표준 기반 및 합리적 비용의 CDSS 플랫폼 구출을 통해 해외 지출 경감 및 국내 의료 인공지능 산업의 성장에 기여하는 것이다.

전국 각 지역을 대표하는 2, 3차 의료기관의 10년치 후향적 데이터 분석을 통해 국내 대장암 수술 후 합병증 형태와 발생률을 분석하여 공공 데이터로 공유하고, 각 기관별 수술 후 합병증을 줄일 수 있을 것이라 기대한다. 후향적 데이터의 결과를 바탕으로 중요한 지표로 평가되는 항목들을 전향적으로 누락없이 수집함으로써, 합병증에 영향을 주는 자료의 근거를 강화하여 수술 후 합병증의 위험도를 예측할 수 있는 AI 시스템을 구축하고 CDSS를 개발하고자 한다.

구축된 데이터를 통해 환자의 합병증을 줄이기 위한 지속적인 범국가적인 연구와 장기적인 추적연구가 가능하게 함으로써, 대장암 환자의 재발 및 생존률 향상 및 치료의 질 향상을 도모하고자 한다. 국내 대장암 수술의 평균 연간 시행 건수의 약 35%에 해당하는 6,790건의 10년치인 67,900건 [(colon cancer surgery 평균 14,200 cases/yr (2013~2018, 85,601), rectal cancer surgery 평균 5,200 cases/yr (2013~2018, 31,719)) 으로써, 처음 3년 동안의 후향적 연구에서는 약 6만8000건의 데이터를 후향적으로 수집할 계획이고, 수집 데이터를 분석하여 현재의 대장직장 수술 후 합병증 현황, 위험인자를 분석하고 각각의 합병증을 줄이기 위한 방법에 대해 분석하고자 한다.

제한된 연구 기간 동안 효과적인 데이터 입력을 위해서 참여 병원을 확대하고자 하며, 참여를 희망하는 연구자는 고려대학교 안산병원이나 학회 데이터등록위원회를 통해 참여의사를 밝히면 기관 IRB/DRB 승인을 위해서 표준 연구계획서와 일체의 서류를 지원하오니 많은 참여 부탁드립니다.

Seulgi BYEON
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Education

2011-2015 백석대학교- 전공: 간호학과 - 학사학위 졸업
2024-현재 한양대학교 보건대학원 - 전공: 역학 및 보건통계학- 석사과정 중

Professional Experience

2015-2017 천안 순천향대학교병원, 호흡기내과 병동간호사
2017-2019 아주대학교병원, 임상연구윤리센터 QA팀원
2019-2020 강남 세브란스병원,임상연구윤리센터 QA팀원, 종사자교육 담당자
2021-2022 분당 서울대학교병원,담췌외과 CRC
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2024-현재 한국외과연구재단, 데이터관리위원회 과장

Data Entry Guideline for Common Variables

Seulgi BYEON

The Korean Surgical Research Foundation, Korea

본 발표에서는 K-QIPS 과제의 자료입력 지침서에 대한 최근 업데이트 사항과 연구진들이 자주 문의하는 질문들에 대한 답변을 중점적으로 다루고자 합니다. 임상연구 데이터의 정확성과 일관성은 연구 결과의 신뢰성에 큰 영향을 미치므로, 데이터 입력 과정에서 발생할 수 있는 오류를 최소화하고, 효율적인 데이터 관리를 위한 새로운 지침을 소개합니다.

주요 내용은 다음과 같습니다:

1. 데이터 입력 지침서 업데이트:
    - o 최근 개정된 지침서의 주요 변경 사항 설명
    - o 데이터 입력 시 유의해야 할 새로운 항목 및 절차 안내
2. 자주 묻는 질문 (FAQ) 해설:
    - o 연구진들이 가장 많이 문의하는 내용에 대한 상세한 답변
    - o 업데이트된 지침과 관련된 추가적인 질문 및 답변 제공

이번 발표를 통해 연구진들이 임상연구 데이터 입력 과정에서 겪는 어려움을 해소하고, 업데이트된 지침을 정확히 이해함으로써, 연구의 효율성과 데이터 품질을 향상시키는 데 기여할 수 있기를 기대합니다.

Youn Young PARK

Kyung Hee University Hospital at Kang Dong, Korea

Education

2007~2011 M.D. School of Medicine, Kyung Hee University

2013~2016 Ph. D. Department of Surgery, Kyung Hee University

Professional Experience

2012-2016 Resident, Kyung Hee University Hospital

2016-2018 Fellow, Severance Hospital, Yonsei University

2018-2019 Fellow, Uijeongbu St. Mary's Hospital, The Catholic University of Korea

2019-2021 Clinical assistant professor, Uijeongbu St. Mary's Hospital, The Catholic University of Korea

2021~2022 Clinical assistant professor, Kyung Hee University Hospital at Gangdong

2022-present Assistant professor, Kyung Hee University Hospital at Gangdong, Kyung Hee University College of Medicine

Data Entry Guideline for Colon and Rectum - Specific Variables

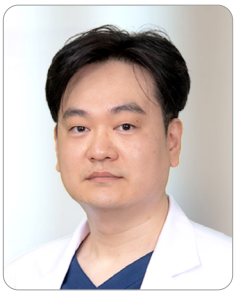
Youn Young PARK

Kyung Hee University Hospital at Kang Dong, Korea

This lecture provides a comprehensive overview of the specific variables essential for accurate data entry in K-QIPS project involving colorectal surgery, as outlined in the CRF (Case Report Form) input guidelines. The focus will be on the "C-Items" (specific variables for colorectal surgery) except the common variables.

The CRF is structured to cover various stages of patient care, from preoperative assessments to postoperative follow-up. Within this structure, C-Items are crucial for documenting patient data related to colorectal surgery. In the Preoperative Evaluation (Section II), the lecture will cover items such as history of other organ cancers and preoperative vital signs, which are critical for assessing the patient's readiness for surgery. The Surgical Information (Section IV) will focus on key intraoperative variables, including intraoperative findings such as bowel perforation and surgical leak tests, ect. These items are essential for capturing the specifics of the surgical process and any immediate complications. Postoperative complications, as outlined in Section VI, will include variables like anastomotic leakage and delayed postoperative ileus et al., which are vital for monitoring the patient's recovery and identifying potential post-surgical issues.

Throughout the lecture, the importance of accurately recording these specific variables for colorectal surgery will be emphasized, as they are integral to understanding the full scope of patient care in colorectal surgeries. Attendees will gain insights into the structured approach necessary for high-quality data collection, ensuring that the research findings are robust and applicable to clinical practice.



Sunseok YOON

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Education

2003-2011	Ajou university school of medicine
2017-2022	Ajou university school of medicine, B.A.
2023-present	Korea university medical school, phD.

Professional Experience

2020-2022	Clinical fellow, colorectal surgery, Ajou university hospital
2022-present	Clinical assistant professor, colorectal surgery, Korea university ansan hospital

Getting Approval of IRB & DRB

Sunseok YOON

Korea University Ansan Hospital, Korea

1. IRB의 근거

- 생명윤리법에 따른 기관생명윤리위원회

“생명윤리 및 안전에 관한 법률”에 따른 기관생명윤리위완회는 인간 또는 인체유래물을 대상으로 하는 연구나 배아 또는 유전자 등을 취급하는 생명윤리 및 안전의 확보가 필요한 기관에서 연구계획서 심의 및 수행 중 연구과정 및 결과에 대한 조사, 감독 등을 통한 연구자 및 연구대상자 등을 적절히 보호할 수 있도록 설치된 자율적, 독립적 윤리기구를 말한다.

- 법률적 근거

생명윤리법은 법 제10조 1항에서 각 기관에서 수행되는 연구 및 활동에 대한 생명윤리 및 안전의 확보를 위해 기관위원회를 설치하도록 규정하고 있다.

2. 보건의료데이터 활용 가이드라인

- 개정된 개인정보 보호법이 시행('20.8.5)됨에 따라, 데이터 활용의 핵심인 가명정보 활용에 대한 법적 근거 마련(제3절 특례조항 신설)

  개인정보처리자가 개인정보를 가명처리하여 통계작성, 과학적 연구, 공익적 기록보존 등의 목적으로 활용할 수 있는 기반 마련

- 개인정보 보호 법령 등에서 구체적으로 정하지 않은 가명처리, 가명정보의 처리 및 결합 활용 등에 있어 보건의료데이터의 특수성 고려 필요

  보건의료데이터의 분야, 유형, 목적별 세부 방법과 절차를 제시하여 현장 혼란을 최소화하고, 자료 오남용 방지

  처리 과정 전반에 걸쳐 절차 및 거버넌스, 안전조치, 윤리적 사항 등을 정하여 정보 주체의 권익을 보호하고 안전한 개인정보 처리 도모

Oh Chul KWON
MDB Inc., Korea

Education

2006-2012	Doctor of Medicine, Dongguk University College of Medicine
2013-2017	Resident(General Surgery), Dongguk University Ilsan Hospital

Professional Experience

2012-2013	Internship in Dongguk University Ilsan Hospital
2013-2017	Residency of General Surgery in Dongguk University Ilsan Hospital
2017-2020	Surgeon, Republic of Korea Army
2020-2020	CTO, 40FY Inc.
2021-	CEO, MDB Inc.

Yerim JEONG

Korea University Ansan Hospital, Korea

Education

Sunlin University graduation

Professional Experience

2021-2022	Central Accident Control Headquarters COVID-19 ward
2022-2023	General Hospital GS ward
2023	Korea University Ansan Hospital CRS. SCR

Room 1

[Luncheon Symposium]
Johnson & Johnson MedTech

Chair

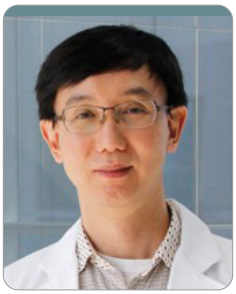
Yoon Suk LEE The Catholic University of Korea, Korea

Room 1

The Jae Gahb Park for Outstanding Contribution to Colon and Rectal Surgery

Chair

Hyeong-Rok KIM Chonnam National University, Korea



Gyu-Seog CHOI
Kyungpook National University Chilgok Hospital

Education

1987	Graduated Kyungpook National University, School of Medicine
1999	Graduated Kyungpook National University, Postgraduate School

Professional Experience

1992-1996	Faculty, Department of Surgery, Sanju Red Cross Hospital, Sangju, Korea
1996-1998	Full-time Lecture, Department of Surgery, Kyungpook National University Hospital, Daegu, Korea
2000-2002	Post-doctoral research course in Cancer & Immunogenetics Laboratory, Cancer research UK, Institute of Molecular Medicine, John Radcliffe Hospital, Oxford
1998-2007	Assistant Professor, Kyungpook National University Hospital, Daegu, Korea
2007-Present	Professor, Kyungpook National University Hospital, Daegu, Korea
2010-Present	Head of Department of Surgery, Kyungpook National University Hospital, Daegu, Korea
2011-Present	Head of Colorectal cancer center, Kyungpook National University Chilgok Hospital, Korea
2023-Present	Adjunct Professor, China Central South Univ. Xiangya Hosp., China

The Evolution of Minimally Invasive Surgery in Colorectal Cancer

Gyu-Seog CHOI

Kyungpook National University Chilgok Hospital

The evolution of colorectal cancer surgery has been marked by a significant shift from traditional open surgery to the adoption of minimally invasive techniques, including laparoscopic and robotic surgeries. These advancements have redefined clinical practice, offering several benefits such as reduced postoperative morbidity, enhanced recovery times, and improved patient-reported outcomes. Technological innovations, such as advanced imaging modalities, refined surgical instruments, and procedural refinements, have been instrumental in driving the progress of minimally invasive surgery (MIS).

Despite these advancements, challenges such as the steep learning curve, patient selection, and the management of complex cases have posed barriers to the widespread adoption of MIS in colorectal cancer treatment. Comparative studies on long-term oncologic outcomes indicate that MIS approaches are at least equivalent, if not superior, to traditional open surgery, further cementing their role in contemporary surgical practice.

The emergence of robotic-assisted surgery has further expanded the potential of MIS, offering unprecedented precision and control in complex colorectal procedures. The evolution of these techniques highlights their impact on current surgical standards and underscores the importance of continued innovation and research in optimizing outcomes for colorectal cancer patients.

In addition to these advancements, the development of fluorescence imaging and artificial intelligence (AI) has further enhanced the precision and effectiveness of MIS in colorectal cancer. Fluorescence imaging allows for real-time visualization of critical anatomical structures, aiding in the identification of lymph nodes and tumors, while AI is beginning to offer new avenues for decision support, image analysis, and personalized surgical planning. The integration of these cutting-edge technologies with robotic-assisted surgery continues to expand the potential of MIS, driving further innovation and improving outcomes for colorectal cancer patients.

Room 1

[Laparoscopic Colorectal Surgery Study Group] CME (Live Surgery)

Chairs

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Yonsei University, Korea

Education

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2002-2007	M.S. Graduate School, Yonsei University, Seoul, Korea
2012	Ph.D. Graduate School, Yonsei University, Seoul, Korea

Professional Experience

1998-1999	Internship, Yonsei University Hospital
1999-2003	Residency, Department of Surgery, Yonsei University Hospital
2008-2013	Assistant Professor, Department of Surgery, Yonsei University College of Medicine
2013-2018	Associate Professor, Department of Surgery, Yonsei University College of Medicine
2018-Present	Professor, Department of Surgery, Yonsei University College of Medicine
2020-Present	Director, Colorectal Cancer Center, Yonsei University College of Medicine

Room 2

[Benign Anorectal Diseases] All about Perianal Fistula

Chairs

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Woo Jung NAM Seoul Songdo Hospital, Korea

Varut LOHSIRIWAT
Mahidol University, Thailand

Education

Dr. Lohsiriwat was granted the Master of Science (M.Sc.) in Surgical Science from the Imperial College of London, University of London (UK) in 2007, and the Doctor of Philosophy (Ph.D.) in Gastrointestinal Surgery from University of Nottingham (UK) in 2010. Also, he was a research fellow at St. Mark's Hospital (Harrow, UK) in 2006-2007, a visiting surgeon at Mayo Clinic (Minnesota, USA) in 2010, and an invited visiting professor at Kyushu University Hospital (Fukuoka, Japan) in 2017

Professional Experience

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Understanding the anatomy and the problems of current fistula classification

Varut LOHSIRIWAT

Mahidol University, Thailand

Correct anatomical knowledge of anal fistula and anal sphincter complex is the key for successful management of fistula. Classification of anal fistula ideally should be able to exist in clinical practice, applicable to all fistulae, reproducible and able to comparable among clinicians as well as indicate treatment options and predictive of prognosis. It should also be compatible with other investigative modalities (e.g. MRI, 3D-EAUS) with minimal interpreter dependence. So far, the best classification of anal fistula is yet established. However, at least we as colorectal surgeons should describe information of anal fistula pattern including the details of primary tract (and secondary tract if presented) in relation to anal sphincter complex, location of internal and external opening, whether there is a cavitation or abscess formation and any evidence of active infection (and so on).

Dong Ho CHO
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Education

2000	Graduated Chosun Univ. of Medical school
2005	Completed Residentship, Sungkyunkwan Univ. Medical school Kangbuk Samsung Hospital
2007	Completed Fellowship, Sungkyunkwan Univ. Medical school Kangbuk Samsung Hospital

Professional Experience

2007-Present	Staff, Seoul Song Do Hospital
2012-Present	Adjunct professor, Sungkyunkwan Univ. Medical school Kangbuk Samsung Hospital
2016-Present	Director of Surgery, Seoul Song Do Hospital
2016-Present	Chief of Proctology Clinic, Seoul Song Do Hospital

Management of Recurrent Anal Fistula?

Dong Ho CHO

Seoul Songdo Hospital, Korea

A recurrent fistula is a fistula that has re-emerged from the same origin after previous surgery. It indicates that the wound has not fully healed and continues to drain pus. Recurrence rates following fistula surgery have been reported to range from 4% to 10%, though the incidence varies depending on the type of fistula. In general, recurrence is more common in complex fistulas compared to simple ones.

The cause of recurrence after fistula surgery may include the inability to find an internal opening, leaving behind an unrecognized abnormal tract during surgery, incomplete division of the tract due to fear of fecal incontinence, premature closure of the wound, and lack of awareness of underlying diseases such as tuberculosis, Crohn's disease, or fistula cancer. The most common cause of recurrence is the failure to find an internal opening. According to Jordan's report, only the failure to identify the internal opening was associated with a higher risk of recurrence.

The healing time required depends on the complexity of the fistula and the type of surgery. A simple fistulotomy may heal in 4 to 5 weeks, while a complex one may take several months. In most studies, the timing of recurrence is noted at the end of the study. According to Bokhari's report, a clinical definition of the time of recurrence has been almost universally accepted, which is the presence of discharge symptoms during follow-up.

When a fistula recurs, the first step is to rule out underlying diseases such as tuberculosis, Crohn's disease, and cancer. Secondly, if all test results for the following examinations come back normal — including AFB stain for tuberculosis, Tbc spot test, small bowel examination for Crohn's disease, cytology, MRI, and biopsy for cancer — under spinal anesthesia, verify if you have accurately located the internal opening and ensure that you haven't overlooked any blind tracts. Third, ensure proper drainage. If there is a blind tract or improper drainage, make an appropriate incision.

References

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2. Jose V, Julio Jordan, et al. Changes in anorectal morphologic and functional parameters after fistula-in-ano surgery. Dis Colon Rectum, 2009;52:1462-1469.
3. S. Bokhari, Incontinence following sphincter division for treatment of anal fistula, Colorectal diseases, 2010;12:135-139.
4. J jordan, Risk factors for recurrence and incontinence after anal fistula surgery. Colorectal disease

Julio del CASTILLO

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Education

Bachelor of Medicine and Bachelor of Surgery. Cantabria University Medical School
Diploma award to the best academic record, Cantabria University Medical School
Doctor “Cum Laude”. Medicine and Surgery (PhD). Cantabria University
Specialist in General Surgery, Hospital Universitario Marqués de Valdecilla (HUMV). Santander.
Valdecilla Public Foundation Scholarship for an elective period at the Queen Elizabeth Hospital Colon and rectal Unit in Birmingham (England).
Marcelino Botin Foundation Scholarship for an elective period at the University of Minnesota Colon and Rectal Unit in Minneapolis, USA.
EBSQ coloproctology. Munich, 2011

Professional Experience

Founder and Head: Colon and Rectal surgery Unit, HUMV, Santander.
Director. Ethicon Grant. Colorectal fellowship program. HUMV
EBSQ coloproctology examiner.
Associate Professor of Surgery. School of Medicine, Cantabria University (UNICAN), Santander, Spain
Professor, Master in Pelvic Floor Disorders. School of Medicine, Universidad Miguel Hernandez de Elche, Spain
Professor, Master in Coloproctology. School of Medicine, Universidad de Zaragoza, Spain

Why does fistula surgery fail?

Julio del CASTILLO

Hospital Universitario Marques de Valdecilla, Santander, Spain

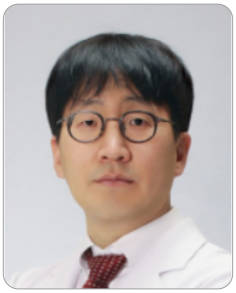
Variable cure rates, a non-negligible percentage of failures, and the risk of fecal incontinence make us continue to explore new treatment options for perianal fistulas.

Failure to recognize the internal opening or to identify secondary tracts and incomplete fistulous tract excision are factors traditionally associated with failed repair, mainly in supra- and extrasphincteric, horseshoe, and high-extending types.

A higher likelihood of recurrence following surgical repair is also linked to patient comorbidities (such as radiation, Crohn's disease, proctitis, cancer, diabetes, smoking, and immunosuppression), the number of prior repair attempts, and the type of surgical treatment.

Different anatomical characteristics associated with the fistula and technical modifications of the surgical procedures used are equally decisive when the results are analyzed.

In addition to the aforementioned, the lack of understanding of the biomolecular mechanisms causing and sustaining the fistulous process plays a very important role that contributes to the variability of the success of surgical treatments. Expanding the investigation into the potential of stem cells as anti-inflammatory and immunomodulatory agents and their impact in chronic inflammatory conditions, including those found in Crohn's disease fistulas, might offer a novel and promising approach to the issue.



Hyoungrae KIM
Hangun Hospital Busan, Korea

Education

Chungang Univ. Graduation
St Mary Catholic Univ. Training

Professional Experience

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New treatments for anal fistula disease (VAAFT, laser, stem-cell, Rafelo)

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Introduction

The treatment of anal fistulas has undergone significant advancements in recent years, with the development of new minimally invasive techniques that aim to balance effective fistula closure with the preservation of anal sphincter function. Traditional approaches, such as fistulotomy, often lead to complications like fecal incontinence, particularly in cases involving complex fistulas. This paper introduces and evaluates the latest innovations in the treatment of anal fistulas, including VAAFT (Video-Assisted Anal Fistula Treatment), FiLaC (Fistula Tract Laser Closure), the use of advanced biomaterials such as synthetic and bioprosthetic plugs, and the application of autologous adipose-derived stem cell therapy.

New Treatment Modalities

VAAFT (Video-Assisted Anal Fistula Treatment): This technique employs a specialized video scope to visualize and treat the fistula tract internally, reducing the need for extensive surgical dissection and minimizing damage to surrounding tissues. VAAFT has shown promising results in complex fistulas, offering a recurrence rate of approximately 17.7% and maintaining sphincter integrity.

FiLaC (Fistula Tract Laser Closure): FiLaC uses laser energy delivered through a radial fiber to obliterate the fistula tract. This procedure is particularly effective in preserving sphincter function, with primary healing rates reported at 64.1%, and higher success upon secondary application.

Advanced Biomaterials (Plugs and Glues): The introduction of synthetic plugs like GORE Bio-A and the ongoing use of bioprosthetic plugs offer alternatives to traditional surgical closure. These materials are designed to support the natural healing of the fistula tract while minimizing the risk of incontinence. However, long-term success rates vary and further data is needed to establish their efficacy conclusively.

Stem Cell Therapy: The use of autologous adipose-derived stem cells represents a cutting-edge approach to fistula treatment. This therapy leverages the regenerative properties of stem cells to promote healing of the fistula tract while preserving sphincter function. Early results are promising, with healing rates exceeding 70% in initial studies, although the high cost and technical complexity limit

its widespread adoption.

Our hospital performs the Mini CAL**(Cell Assisted Lipo-transfer)** procedure, which is a cost-effective alternative to expensive stem cell(Cupistem or Alofisel) therapies. This method combines fat purified through centrifugation and stromal vascular fraction (SVF) isolated from remaining material after fat removal using colagenase. Mini CAL is effective in refractory complex fistula. Ongoing research is essential to further validate and improve this approach.

Fistura: This is a treatment for anal fistulas that involves using radiofrequency (RF) ablation to shrink the fistula tract. The method works by applying RF energy, which generates heat to collapse and close the fistula, promoting healing while preserving surrounding tissues. This minimally invasive technique is designed to reduce pain and recovery time compared to traditional surgical methods.

Conclusion

The landscape of anal fistula treatment is rapidly evolving, with new techniques offering safer and more effective options for patients, especially those with complex fistulas. Minimally invasive procedures like VAAFT and FiLaC, Fistura alongside innovative materials and stem cell therapy, represent the future of fistula management. Continued research and refinement of these techniques will be essential to maximize their potential and make them accessible to a broader patient population.

Keywords

Anal fistula, VAAFT, FiLaC, stem cell therapy, Mini CAL, fistula plugs, fistura, sphincter preservation

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Education

1984	M.B. B.S. Karnataka University, India
1989	M.S. Bombay University, India
2003	FACRSI Fellowship examination of Association of Colon & Rectal Surgeon of India

Professional Experience

Head- General Surgery & Colorectal Department - Saifee Hospital, Mumbai.

Chairman of the fellowship board of Association of Colon & Rectal Surgeons of India

Executive member of the board of International Society of University Colon & Rectal Surgeons

Gwan Chul LEE
Hansol hospital, Korea

Education

1996-2003	Kosin University college of medicine / Undergraduate
2003-2006	Public health Doctor
2006-2007	Internship / Korea Cancer Center Hospital
2007-2011	Residency / Department of Surgery, Samsung medical center
2011-2012	Fellowship / Colorectal Surgery, Samsung medical center
2012-	Department of colorectal surgery, Hansol hospital

Professional Experience

Physician in the Republic of Korea
Specialist of General Surgery in the Republic of Korea
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Specialist of Coloanal Endoscopic Examination in the Republic of Korea

COI Disclosure

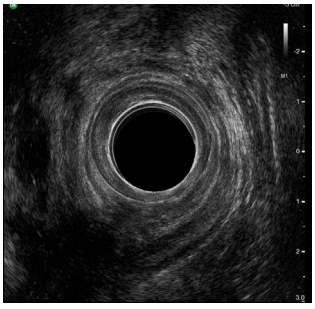
Name of Author : Gwan Chul LEE

I have no personal or financial interests to declare:

I have no financial support from an industry source at the current presentation.

Case 1. Acute perianal abscess with suspicious fistula

- M/47
- Acute onset perianal pain and fever
- Posterior to Rt. Side spread perianal abscess(6~10 o'clock)
- Suspicious anal fistula(6 o'clock), but ill defined internal opening



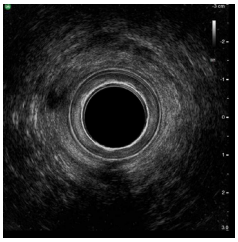
Q1; What is your initial treatment options?

1. Only incision and drainage
2. Bridging loose seton
3. I&D and fistulotomy
4. Loose seton and fistulotomy
5. Loose and cutting Seton apply
6. Other procedure

QR code for google survey

Case 2. Multiple fistula with Crohn disease

- F/36
- Underline Crohn disease
- 10 o'clock previous anal fistula seton apply
- 6 o'clock newly anal fistula and abscess



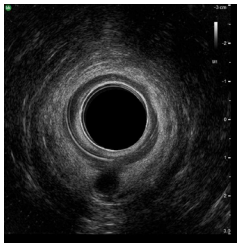
Q2; What is your treatment options?

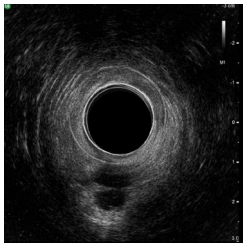
1. Only incision and drainage
2. I&D and fistulotomy
3. Only Loose Seton apply
4. Cutting seton apply
5. Other sphincter saving procedure

QR code for google survey

Case 3. Trans-sphincteric anal fistula

- M/32
- 6 o'clock trans-sphincteric type fistula





Q3; What is your treatment options?

1. Fistulotomy
2. Only cutting seton
3. Only loose seton
4. Inter-sphincteric Divided seton(loose & cutting)
5. Partial fistulectomy(Coring out) and cutting seton
6. Other sphincter saving procedure

QR code for google survey

Case 4. Perianal fistula combined hemorrhoids

- F/42
- 2 o'clock perianal fistula
- Combined hemorrhoids

Q4; What is your treatment options?

1. Only fistula management
2. Fistula management with hemorrhoidectomy

QR code for google survey

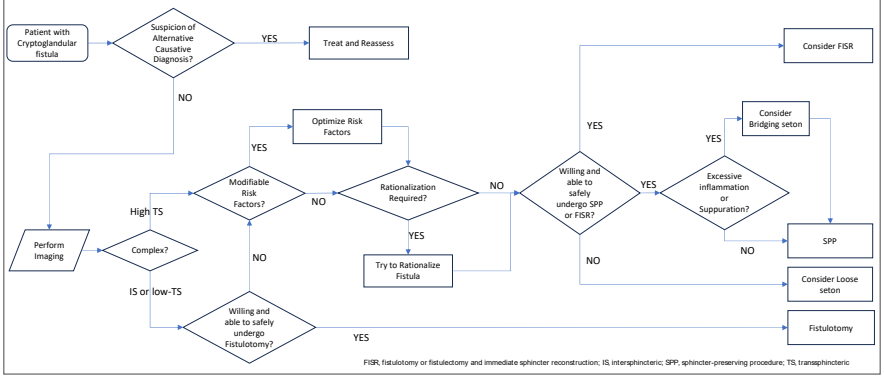
Q5; What is your favor seton material?

1. Silk
2. Nylon
3. Silicon band(vessel loop)
4. Latex glove
5. Rubber band
6. Silastic drain

QR code for google survey

Proposed Algorithm for Management of new Fistula

European Society of Coloproctology: Guidelines for diagnosis and treatment of cryptoglandular anal fistula *Colorectal Disease*. 2024;26:145–196



Room 3

[Basic&Translational Research]
Personalized Medicine & New perspectives of pathogenesis in CRC

Chairs

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Nasser AL-SANEA

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Young Seok JU
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Education

2007-2010 PhD Biochemistry, Seoul National University College of Medicine, Korea
2001-2007 MD Seoul National University College of Medicine, Korea

Professional Experience

2010-2013 Postdoctoral Research (Substitution of military service), Macrogen Inc., Korea
2013-2015 Postdoctoral Fellow, Cancer Genome Project, Wellcome Sanger Institute, UK Advisors: Prof. Mike Stratton & Dr. Peter Campbell
2015-present Assistant Professor/Associate Professor, GSMSE, KAIST, Korea
PI of Laboratory of COSMOS (http://julab.kaist.ac.kr)
(Comprehensive Observation of Somatic Mosaicism, its Origins and Significance)
2020-present Genomics co-founder, Inocras Inc., San Diego, CA, USA.
2021-present Director Center for Somatic Mutation and Mosaicism (CSM2), KAIST,Korea

Whole genomic sequencing: Widespread somatic L1 retrotransposition in normal colorectal epithelium

Young Seok JU

KAIST, Korea

Throughout an individual's lifetime, genomic alterations accumulate in somatic cells. However, the mutational landscape induced by retrotransposition of long interspersed nuclear element-1 (L1), a widespread mobile element in the human genome, is poorly understood in normal cells. Here we explored the whole-genome sequences of 899 single-cell clones established from three different cell types collected from 28 individuals. We identified 1,708 somatic L1 retrotransposition events that were enriched in colorectal epithelium and showed a positive relationship with age. Fingerprinting of source elements showed 34 retrotransposition-competent L1s. Multidimensional analysis demonstrated that (1) somatic L1 retrotranspositions occur from early embryogenesis at a substantial rate, (2) epigenetic on/off of a source element is preferentially determined in the early organogenesis stage, (3) retrotransposition-competent L1s with a lower population allele frequency have higher retrotransposition activity and (4) only a small fraction of L1 transcripts in the cytoplasm are finally retrotransposed in somatic cells. Analysis of matched cancers further suggested that somatic L1 retrotransposition rate is substantially increased during colorectal tumorigenesis. In summary, this study illustrates L1 retrotransposition-induced somatic mosaicism in normal cells and provides insights into the genomic and epigenomic regulation of transposable elements over the human lifetime.

Woong Yang PARK

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Education

1982-1988	MD, Seoul National University College of Medicine (Medicine), Korea
1988-1995	PhD, Seoul National University Graduate School (Biochemistry), Korea
1997-1998	PostDoc, Rockefeller University (Neuro-Immuno-Oncology), USA

Professional Experience

1998-2012	Professor, Seoul National University College of Medicine, Korea
2013-Present	Professor, Sungkyunkwan University School of Medicine, Korea
2013-Present	Director, Samsung Medical Center Genome Institute, Korea
2018-Present	CEO, Geninus Inc., Seoul, Korea
2023-2023	President, Korea Genome Organization, Korea
2023-Present	CEO, GxD Inc., Kashiwa, Japan

Spatial Transcriptome Analysis for Drug Development?

Woong Yang PARK

Sungkyunkwan Universiy, Samsung Medical Center, Korea

The technology for analyzing transcriptomes at the single-cell level in paraffin-fixed tissue slides is advancing rapidly. Spatial transcriptome analysis, a technology capable of examining gene expression and cell location at the genomic level in tissue slides, enables the comprehensive analysis of the functional characteristics of each cell within the cancer microenvironment by scrutinizing the transcriptome at the single-cell level for all cells present on a cancer tissue slide. The tumor microenvironment (TME), which significantly influences cancer progression, is intricate and often exhibits variability among patients. The composition of the cells constituting the tumor microenvironment profoundly affects the overall clinical course of the patient. Spatial transcriptome analysis facilitates the acquisition of crucial information, including the spatial distribution of cells and their interactions within the tumor microenvironment. In the future, investigating the correlation between the spatial cellular architecture composing the TME and the response to immunotherapy will furnish essential insights for identifying new targets or analyzing the mode of action.

Eun Kyung CHOE
Seoul National University Hospital

Education

2002	M.D. Seoul National University, College of Medicine
2004	M.S. Seoul National University, College of Medicine
2008	Ph.D. Seoul National University, College of Medicine

Professional Experience

2002-2003	Intern in medicine, Seoul National University Hospital, Seoul, Korea
2003-2007	Resident in General Surgery, Seoul National University Hospital, Seoul, Korea
2007-2009	Clinical Fellow in Coloproctology, Seoul National University Hospital, Seoul, Korea
2009-Present	Clinical Professor, Department of surgery, Seoul National University Hospital
2019-2020	Visiting Associate Professor, Department of Biostatistics, Epidemiology and Informatics (DBEI) at the University of Pennsylvania's Perelman School of Medicine
2020-Present	Adjunct Professor, Transdisciplinary Department of Medicine & Advanced Technology, Seoul National University Hospital

Novel research and future prospects of AI and bioinformatics in Colorectal cancer

Eun Kyung CHOE

Seoul National University Hospital

This presentation will provide a short overview of the evolving landscape of Artificial Intelligence (AI) in medical research, with a specific focus on its applications in bioinformatics and colorectal cancer studies. The talk traces the progression of AI in medicine from early pattern recognition techniques to the current era of advanced language models and generative AI.

It will be discussing about

- The historical development of AI in medical research, from basic machine learning to deep learning and convolutional neural networks (CNNs)
- The emergence of large language models (LLMs) like GPT-4 and their potential impact on medical research
- Challenges in adapting AI to medical applications, including issues of hallucination, privacy, and cybersecurity
- Strategies to overcome these challenges, such as prompting techniques, Retrieval-Augmented Generation (RAG), and model fine-tuning
- The development of domain-specific models like CancerLLM and their superior performance in oncology-related tasks
- Practical applications of AI in cancer research, including gene prioritization, reactome curation, and clinical trial recommendations
- The potential future of AI in scientific discovery, as demonstrated by the AI Scientist model

The presentation will emphasize the growing importance of AI in medical research and encouraging researchers to embrace these tools for more efficient and innovative studies in colorectal cancer and beyond.

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HEM Pharma, Korea

Education

Professional Experience

Jisun KIM
Ulsan University, Asan Medical Center, Korea

Education

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2012-2015 Ph.D., College of Medicine, Seoul National University, Seoul, Korea

Professional Experience

2012-2014 Clinical assistant professor, Dept. of Surgery,
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2014-2017 Clinical assistant instructor, Dept. of Surgery, Asan Medical Center,
College of Medicine, University of Ulsan, Seoul Korea
2016-2017 Visiting investigator, research fellow, Dept. of Pathology,
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2017-2022 Assistant professor, Dept. of Surgery, College of Medicine,
University of Ulsan, Asan Medical Center, Seoul Korea
2022-2023 Visiting investigator, research fellow, Dept. of Oncology,
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2023-current Associate professor, Dept. of Surgery, College of Medicine,
University of Ulsan, Asan Medical Center, Seoul Korea

Minimal residual disease for early colorectal cancer

Jisun KIM

Ulsan University, Asan Medical Center, Korea

The recent advances in precision medicine have led to development of numerous ctDNA techniques. As ctDNA offers non-invasive tumor profiling over tissue biopsy, ctDNA has advantage for repeated serial sampling enabling to address both spatial and temporal tumor heterogeneity. While most ctDNA data have been focused on refining molecular profiling for targeted therapy and monitoring response thereafter for metastatic patients, role of ctDNA in early-stage cancers are still limited.

For early-stage cancer, the unmet need may be the 1) prognostication to guide systemic therapy, and 2) recurrence monitoring to perhaps early intervene, to eventually improve cure rates. Minimal residual disease (MRD) is defined as micro-metastases that are still present after definitive treatment eg. surgery or adjuvant systemic therapy. Along with recent advances in ctDNA assays, evidence of prognostic role of ctDNA-based MRD has been expanding to various solid tumors including colorectal cancers. A recent meta-analysis from Chakrabarti et al. showed that the pooled hazard ratio (HR) for recurrence-free survival (RFS) IN post-surgical ctDNA-positive vs negative was 7.27 (95%CI 5.49-9.62) and 10.59 (95%CI 5.59-20.06) for post-adjuvant chemotherapy. This talk will mainly focus on the current evidence on ctDNA-guided MRD for prognostication and recurrence monitoring to discuss the potential role for ctDNA guided management for early-stage colorectal cancers. This talk will also cover the methodologies and the two approaches of detecting MRD, tumor-informed and tumor-agnostic methods, to discuss the feasibility of the assays in clinic.

Hidenobu ISHIZAKI

Cancer Institute Hospital, Japanese Foundation for Cancer Research (JFCR), Japan

Education

1996	M.D., Miyazaki University School of Medicine
2007	Ph.D., The University of Tokyo

Professional Experience

2007-2010	Postdoctoral Research Fellow, City of Hope Comprehensive Cancer Center, Duarte, California.
2010-2015	Assistant Professor, Department of Surgical Oncology & Regulation of Organ Function, Miyazaki UniversitySchool of Medicine, Miyazaki.
2015-2020	President & CEO Noile-Immune Biotech Inc., Tokyo.
2020-2022	Chairman of the Board, Noile-Immune Biotech Inc., Tokyo.
2022-Present	Scientific & Medical Advisor, RICOH Biomedical Startup Fund, Tokyo.
2023-2024	Deputy Director, Center for Development of Advanced Cancer Therapy, Cancer Institute Hospital, Japanese Foundation for Cancer Research, Tokyo.
2023-Present	Executive Director, Center for Development of Advanced Cancer Therapy, Cancer Institute Hospital, Japanese Foundation for Cancer Research, Tokyo.
2024-Present	Member of Board of Directors, ARO Council, Tokyo.
2024-Present	Scientific & Medical Advisor, Toyama Pharmaceutical Valley Development Consortium, Toyama.

Cancer vaccines: limitations, effectiveness, and the next immunotherapy frontier

Hidenobu ISHIZAKI

Cancer Institute Hospital, Japanese Foundation for Cancer Research (JFCR), Japan

After several decades, cancer vaccines which designed to activate the body's own immune system to fight against tumors are a current trend in cancer treatment and receiving increasing attention. This presentation provides a brief overview of cancer vaccines and their future prospects, with some discussion of our milestones in cancer vaccine development.

I. Vaccine platform

In general, the most common cancer vaccine platforms are peptide-based, cell-based, viral/bacterial-based, and nucleic acid-based vaccine including personalized mRNA vaccines. We previously demonstrated that modified vaccinia Ankara (MVA) expressing human p53 (p53MVA) stimulation has the potential to induce the expansion of p53-specific CD8+ and CD4+ T cells among some patient's peripheral blood samples. Treatment of established tumor-bearing mice with p53 immunization resulted in significant suppression of tumor growth (2004 Cancer Research, 2007 Cancer Immunology Immunotherapy, 2010 Journal of Immunotherapy, 2011 Cancer Investigation).

II. Controlling immune suppressive tumor microenvironment

In general, tumor cells develop immune evasion mechanisms, and the suppressive effect of the tumor microenvironment can impede the efficacy of activated immune cells. There is an emerging understanding that effective immunity can only be achieved by coordinate disruption of tumor derived immune suppression. Since recent studies have reported that gemcitabine treatment attenuates the tumor-suppressive environment by eliminating CD11b+/Gr-1+ myeloid derived suppressor cells (MDSCs), we demonstrated that MVA expressing full-length murine survivin when administered with gemcitabine resulted in significant tumor regression and prolonged survival on established Pan02 tumors, the poorly immunogenic mouse pancreas adenocarcinoma cell line which expresses murine survivin. The enhanced vaccine efficacy was associated with decreased CD11b+/Gr-1+ MDSCs.

III. Clinical translation and future perspectives

Recent advances in areas such antigen identification, formulation development and manufacturing, combination therapy regimens, and indication and patient selection hold promise to reinvigorate the field. A phase I trial of a p53MVA vaccine in patients with refractory gastrointestinal cancers was conducted, and p53MVA was well tolerated and induced robust CD8+ T cell responses (2014 Clinical Cancer Research). A phase I trial of p53MVA in combination with gemcitabine chemotherapy in patients with platinum-resistant ovarian cancer was also conducted, but gemcitabine without steroid pretreatment was intolerable in some patients. However,

elevated p53-reactive CD4+ and CD8+ T cell responses after therapy correlated with longer PFS (2018 Clinical Cancer Research). Moreover, a phase I trial evaluating the combination of p53MVA and pembrolizumab (anti-PD-1) in patients with advanced solid tumors was conducted. The combination of p53MVA vaccine with pembrolizumab demonstrated to be safe and feasible (2018 Clinical and Translational Oncology). The activity of a combination immunotherapy of p53 vaccine and PD-1 checkpoint blockade in patients with platinum-resistant ovarian cancer was evaluated in a phase II trial. Clinical benefit was correlated with the responsive immune status of patients before and during the treatment, defining potential predictive markers for immune therapy (2023 Cancer Research Communications).

Although targeting tumor antigens has unique advantages for vaccine development, they have also had limitations hindering their success clinically, such as low immunogenicity due to self-antigens, tumor heterogeneity including antigen loss variant. In addition to our work, recent studies have proven that the advantages of mRNA vaccines such as high safety, ease of production, and unmatched efficacy are on full display. Several cancer mRNA vaccines including personalized neoantigen vaccine have achieved promising results in clinical trials, and their usage in conjunction with other immune checkpoint inhibitors has further boosted the efficiency of anti-tumor immune response. We expect a rapid development of cancer vaccines as a next immunotherapy frontier in the near future.

Room 4

[KQIPS Workshop]
Share the Past and Go to the Future Together

Chairs

Clifford Y. KO UCLA Health, USA

Jun Won UM Korea University, Korea

Sun Jin PARK

Kyung Hee University, Korea

Education

1998	M.D. degree from Kyung Hee University College of Medicine, Seoul, Korea
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2010	Ph.D. degree from Kyung Hee University, Graduate School, Seoul, Korea

Professional Experience

1998- 2003	Internship and Residency in General Surgery, Kyung Hee University Hospital
2003-2006	Military Service (Public Health Service)
2006-2009	Fellow and Clinical Assistant Professor, Kyung Hee University Hospital
2010-2015	Assistant Professor, Department of Surgery, Kyung Hee University Hospital
2015-2020	Associate Professor, Department of Surgery, Kyung Hee University Hospital
2020-	Professor, Department of Surgery, Kyung Hee University Hospital

Korean Project, K-QIPS

Sun Jin PARK

Kyung Hee University, Korea

Korean Nationwide Quality Improvement Platform in Surgery(K-QIPS) aims to contribute to national health and the development of the health care industry in Korea by reducing complications, mortality and medical costs through improved surgical quality. We aim to improve surgical quality through the spread of complication platform and to improve national life expectancy, medical expenses, and efficiency of medical resources.

We plan to build up AI-based complication prediction platform, give evidence-based feedback to institutions for postoperative complications, and provide guideline and critical pathways for individual surgery. We need to develop complication prediction AI platform for clinical application, and to collect information on the incidence of individual complications. Finally, we are going to analyze and modify risk factors of complication through institutional feedback, and develop standard guidelines and complication prevention protocol for each institution.

K-QIPS nationwide project is led by the Korean Surgical Society and includes the Korean Surgical Research Foundation and five abdominal surgery departments (gastric surgery, colorectal surgery, hepatectomy and liver transplantation, pancreatic surgery, and kidney transplantation). This project is planned to run for a total of six years, with retrospective data collected over the first three years and prospective data collected over the next three years. This project will develop common complication big data platform for about 219,200 cases in abdominal surgery.

Clifford Y. KO
UCLA Health, USA

Education

1987	B.A. University of Chicago, Chicago, IL in Biology
1989	M.S. University of Chicago, Chicago, IL in ASHUM Program (Arts and Sciences Basic to Human Biology) in Biological/Medical Ethics
1991	M.D. University of Chicago, Chicago, IL
2001	M.S.H.S. University of California, Los Angeles, CA in Health Services Research

Professional Experience

2001-present	Adjunct Research Scientist, RAND Corporation, Santa Monica, CA
2006-present	Vice Chair of Surgery, Clinical Research, UCLA Department of Surgery
2006-present	Associate Director, UCLA-RAND Robert Wood Johnson Clinical Scholars Program
2007-present	Professor of Surgery, Department of Surgery, UCLA School of Medicine
2007-present	Professor of Health Services, UCLA School of Public Health
2007-present	The Robert and Kelly Day Endowed Chair of Surgical Outcomes, UCLA
2007-present	Vice Chair, Department of Surgery, UCLA
2007-present	Director, Division of Research and Optimal Patient Care, American College of Surgeons
2007-present	Director, American College of Surgeons National Surgical Quality Improvement Program

Joseph W. NUNOO-MENSAH

King's College Hospital & Cleveland Clinic London, UK

Education

1997	Fellow of the Royal College of Surgeons of England [FRCS]
2001-2003	University of Cardiff Law School, Cardiff
2003	Master's degree in medical law [LLM]
2007	Intercollegiate Specialty Examination in General Surgery FRCS (Gen.Surg)
2008	Certification of Completion of Training (CCT)

Professional Experience

Mr. Joseph Nunoo-Mensah is a distinguished and highly accomplished colorectal surgeon at King's College Hospital & Cleveland Clinic London celebrated for his profound expertise in colorectal cancer, inflammatory bowel disease, pelvic floor disorders, and advanced proctology, including complex fistulae and haemorrhoids.

Mr. Nunoo-Mensah embarked on his medical journey with a solid foundation, completing his undergraduate medical training at Queen's Medical School, University of Nottingham, from September 1988 to July 1993. His dedication and passion for surgery led him to pursue postgraduate general surgical specialist training in North-West England (Manchester, UK) from July 1998 to July 2008.

Committed to excellence, Mr. Nunoo-Mensah further honed his surgical skills through advanced training in laparoscopic (minimally invasive) surgery at the prestigious Mayo Clinic in Arizona. He also completed advanced training in the treatment of complex colorectal diseases at the University of Southern California, all while earning a Master's degree in Legal Aspects of Medical Practice from Cardiff University.

In August 2008, Mr. Nunoo-Mensah joined King's College Hospital, where his leadership and vision have been instrumental. Since 2018, he has served as the head of the department of colorectal surgery, leading the colorectal cancer multidisciplinary team (MDT) and overseeing the anorectal physiology laboratory. His commitment to advancing colorectal care has made a significant impact on patient outcomes and the medical community.

Since August 2021, Mr. Nunoo-Mensah has also brought his expertise to the new Cleveland Clinic London, where he continues to innovate and excel as a colorectal surgeon. His leadership extends to his roles as Chairman of the Conflict-of-Interest Committee and a member of the Medical Executive Council at the clinic.

Mr. Nunoo-Mensah's dedication to the field is exemplified by his presidency of the International Society of University Colon and Rectal Surgeons (ISUCRS) from 2022-24. His previous roles as Director General from 2020-2022 and Secretary General from 2018-2020 highlight his unwavering commitment to advancing global colorectal surgery.

Tomas POSKUS
Vilnius University, Lithuania

Education

1999	Faculty of Medicine, Vilnius University
2004	General Surgery Residency, Faculty of Medicine, Vilnius University
2008	PhD, Vilnius University,
2010	Clinical Fellow, Mayo Clinic, USA,
2018	Fellow of the European Board of Surgery Coloproctology
2023	Examiner of the European Board of Surgery, Coloproctology

Professional Experience

Head of Abdominal and Oncosurgery Centre, Vilnius University Hospital Santara Clinics
Director, Translational Health Research Institute, Faculty of Medicine, Vilnius University
Professor of Surgery, Vilnius University

2022-2025	Lithuanian Association of Surgeons, President Elect
	Lithuanian Society of Coloproctologists, Vice President
2023-2026	European Association of Coloproctology, Membership committee,
	Eastern region representative

Kotaro MAEDA
Shonan Keiiku Hospital, Japan

Education

1979	Keio University School of Medicine
2004-2017	Professor and Chairman Department of Surgery, Fujita Health University
2016-2022	Director & Professor, International Medical Center Fujita Health University Hospital
2022-	Deputy Chief Director Medical Cooperation Kenikukai Shonan Keiiku Hospital

Professional Experience

Present position: Deputy Chief Director Shonan Keiiku Hospital

Honorary Executive Director, International Medical Center,
Fujita Health University Hospital

Visiting Professor Fujita Health University

National Clinical Database (NCD), Japan

Kotaro MAEDA

Shonan Keiiku Hospital, Japan

General Incorporated Foundation National Clinical Database (NCD) was founded in 2010 as a database of surgical cases initially to support Training and Certifying System of Medical Specialist. NCD was established initially by ten surgical societies; Japan surgical Society, the Japanese Society of Gastroenterological Surgery and so on. Registration of cases was started in 2011. Three thousand and three hundred seventy four institution joined to NCD, and 1,172, 507 cases was registered in 2011. In April 2024, 5679 institutes joined, and 2,630,000 cases was registered in 2023. Totally 28,480,000 cases were registered so far.

Maintenance and support of the data collected, analysis of data collected, evaluation of medical standard and support of clinical research by using database, and business partnership with associated group by using database are the object of NCD now. NCD was applied for Training and Certifying System of Medical Specialist from 2012 by Japan Surgical Society and so on, and was applied as risk calculator from 2014 to feedback the risk of surgery. Data of registration is done by entering basic items and evaluation items according to field through internet with only anonymized information.

Analysis of data and clinical research have been published as follows; Report on National Clinical Database 2020 for gastroenterological surgery in Japan. Yoshiki Kajiwara, et al. 09 Feb. 2023. Impact of covid-19 pandemic, Hibi T, et al. Surgery Today, 54, 751-762. Seshima R, et al. Ann Gastroenterol Surgery 2023, 107-113. Risk of emergent surgery for complicated appendicitis: Japanese nationwide study. Ann Gastroenterol Surgery 2021, 5, 236-242. Clinical outcome of laparoscopic vs open right hemicolectomy for colon cancer: A propensity score matching analysis of Japanese Clinical Database. Matsuda T, Ann Gastroenterol Surg 2020, 4, 693-700.

NCD is going to be used for better and safer surgery, better insurance, and better health of the people.

Grand 1+2+3

[ABSTRACT]
Video Presentation 2

Chairs

Ru Mi SHIN Seoul National University Hospital , Korea

Woong Bae JI Korea University, Korea

Intraoperative Botilinum Toxin and Platelet Rich Plasma Injection to LigaSure Hemorrhoidectomy Wound Site to Reduce Post-hemorrhoidectomy Pain

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Objective

The purpose of this investigation is to elucidate the effects of intrasphincteric injections of botulinum toxin on the maximum resting pressure (MRP) and platelet rich plasma(PRP) injection on enhanced wound healing within the anal canal subsequent to hemorrhoidectomy procedures. Recognizing that an elevated MRP and delayed wound healing postoperatively is a predominant factor contributing to postoperative discomfort, this study endeavors to assess the efficacy and safety of botulinum toxin (BTox)-PRP in ameliorating these symptoms via a mechanism that diverges from traditional treatment modalities.

Methodology

This research incorporated individuals diagnosed with Grade 3 or 4 symptomatic hemorrhoids, all of whom underwent LigaSure hemorrhoidectomy. Participants were allocated into two distinct groups: Group 1, consisting of 53 patients, received an intrasphincteric administration of PRP and 20 IU of Botulinum toxin directly within the internal sphincter at the hemorrhoidectomy site, whereas Group 2, composed of 61 patients, did not receive any such injection. Primary outcomes evaluated encompassed post-hemorrhoidectomy pain levels (both at rest and subsequent to defecation), the progression of wound healing, and incidences of incontinence.

Findings

The rate of wound healing in the BTox-PRP cohort was significantly higher ($P = 0.05$). Furthermore, the BTox-PRP group exhibited a substantial decrease in the mean postoperative pain at rest observed at the 24-hour point, the 10th day, and the 30th day following surgery ($P < 0.05$). The analysis did not demonstrate a significant disparity in pain experienced after defecation ($P = 0.0912$).

Conclusion

The strategy of administering intrasphincteric injection of botulinum toxin and PRP is both exceedingly safe and efficacious for mitigating pain and facilitating wound healing subsequent to hemorrhoidectomy. By transiently lowering the MRP, and boosting wound healing via PRP this technique directly targets a key source of postoperative discomfort, thereby presenting an advantageous alternative to conventional approaches to pain management and wound healing.

Treatment of Dual Incontinence with Descending Perineum Syndrome - Laparoscopic approach -

In Seob JEONG, Sunghwan Hwang

Busan Hangun Hospital, Korea

Aim

Pathogenesis of fecal incontinence is similar to that suggested for stress urinary incontinence. Ligamentous laxity in the suspensory ligaments of the vagina disables the anorectal closure mechanism by impairing the three directional muscle forces, the anterior portion of pubococcygeous(PCM), levator plate(LP), and logitudinal muscle of the anus (LMA), which function in concert with the puborectalis muscle (PRM) to close the anorectal angle and maintain continence. Swash et al conducted studies to establish a link between urinary and fecal incontinence, which showed that both conditions are associated with weakness of the pelvic floor sphincter musculature, pelvic floor diaphragm, and laxity of the pelvic floor. Surgical options for DPS are Laparoscopic SacroColpoPerineopexy (SCPP), Posterior Vaginal Mesh Repair (PVMR), and Perineal Body Repair (PBR). Laparoscopic SCPP can be performed by an expert laparoscopic surgeon through sophisticated and elaborate laparoscopic surgical technique to treat symptom of DPS such as fecal incontinence, urinary incontinence.

The authors aim to report the surgical outcomes of 5 patients who underwent simultaneous Burch operation during Laparoscopic SCPP surgery for the treatment of double incontinence among a total of 65 patients who underwent Laparoscopic SCPP from January 2023 to December 2023

Methods

Author underwent a total of 65 Laparoscopic Sacrocolpoperineopexy to treat DPS. Burch operation was simultaneously carried out for 5 patients among them. Before and after the surgery, CCIS, Manometry, and Defecography were checked, and the improvement of symptoms of stress urinary incontinence(SUI) was investigated.

Results

Among the 5 patients, 4 showed improvement in symptoms of double incontinence, while the remaining one showed improvement of SUI but no improvement in symptoms of fecal incontinence, and is currently under observation.

Conclusion

Performing simultaneous Laparoscopic SCPP and Burch procedure could be suggested as a surgical option in treating patients with Dual Incontinence.

Fistulectomy with Immediate Primary Sphincteroplasty (FIPS): A Stepwise Approach

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COLORECTAL SURGERY, SIRIRAJ HOSPITAL, Thailand

Purpose/Background

Fistulectomy with immediate primary sphincteroplasty (FIPS) is one of the treatments for fistula in ano. However, there are several different techniques to perform FIPS. Therefore, we present this video to demonstrate and simplify how to perform FIPS in a stepwise approach.

Material and methods

A 31-year-old woman with no underlying disease presented with perianal discharge off and on for 3 years. Digital rectal examination revealed an opening at 2 o'clock with palpable fistula tract. After intravenous sedation, the patient was placed in a prone jackknife position. Perianal skin was prepped in a sterile fashion and prophylactic antibiotic was given. The video demonstrated several steps of FIPS beginning with perianal block followed by identifying the internal opening. After then, cored-out fistulectomy was proceeded starting from the external opening to the internal opening of the fistula tract. Finally, the incised internal and subcutaneous external sphincter were primary repaired, and then the anoderm and perianal skin were approximated.

Results/Outcomes

The operative time was 25 minutes. The patient recovered uneventfully and was discharged on the first post operative day. At 6 months of follow up, she had neither recurrence nor fecal incontinence.

Conclusions/Discussion

Fistulectomy with immediate primary sphincteroplasty is a safe and feasible procedure in treatment of fistula in ano with excellent outcomes including faster wound healing, avoiding keyhole deformity in posterior midline fistula, and low recurrent rate, as well as the incontinence rate.

Room 1

[Congress Presidential Lecture]
Congress Presidential Lecture

Chair

Dursun BUGRA Koc University School of Medicine, Istanbul, Türkiye

Woo Yong LEE

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Education

1988	Medical Degree- Doctor of Medicine, Seoul National University
1991	Master Degree - Master of Medicine, Seoul National University
1993	Korean Board of General Surgery
2000	Ph D Degree- PhD of Medicine, Seoul National University

Professional Experience

Since 2009	Professor, Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine
Since 2021	General Director, Samsung Comprehensive Cancer Center
Since 2022	Vice president, Korean Medical Association
Since 2022	President Elect, International Society of University Colorectal Surgeons (ISUCRS)
Since 2023	President Elect, Korean Surgical Society
Since 2024	President Elect, Korean Surgical Society

Minimal Invasive Treatment of Rectal Cancer

Woo Yong Lee

Professor, Department of Surgery, Samsung Medical Center
President Elect, ISUCRS

Rectal cancer treatment has evolved significantly over time.

In this lecture, we will review the development of current established treatments for rectal cancer, such as curative rectal resection and total mesorectal excision. Additionally, we will discuss recent technical advancements that have led to the application of minimally invasive surgery across various surgical procedures, including laparoscopic rectal resection, robotic rectal resection, and transanal endoscopic microsurgery, focusing on local excision techniques.

We will also cover the current state of minimally invasive rectal cancer surgery in South Korea, as well as the outcomes and success factors of cancer treatment. Furthermore, we will discuss the consensus and clinical application of "watch and wait," a recently proposed alternative treatment approach.

In recent years, with the improvement in rectal cancer treatment through immunotherapy, including reports of complete cures of MSI-high rectal cancer using PD-1 inhibitors, we will explore the rapidly changing landscape of rectal cancer treatment and discuss potential future developments in this field.

Room 1

ISUCRS 2026

Chairs

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Room 2

[KSCP-Hong Kong]

Chairs

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Sung-Bum KANG Seoul National University Hospital, Korea

Kaori FUTABA
The Chinese University of Hong Kong, Hong Kong

Professional Experience

Dr Futaba graduated from Medical School at University of Birmingham in the United Kingdom. She completed her training in General, Colorectal and Minimally Invasive Surgery in the UK and was working as a Consultant Colorectal Surgeon at the University Hospital Birmingham, UK before joining the Department of Surgery as an Assistant Professor at the Chinese University of Hong Kong in 2016. She has specialist interest in minimally invasive colorectal surgery, pelvic floor and functional bowel disorders as well as in inflammatory bowel disease.

She is passionate about Medical Education and is always looking for new ways to make learning fun for students. She has obtained a Master's degree in Medical Science in Clinical Education from the University of Nottingham in UK in 2009 with interest in simulation. She enjoys working on a variety of projects with students, trainees and colleagues to produce online learning materials for Medical students to stimulate their interest and encourage higher-order thinking to improve their understanding.

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Education

1996-2002	Graduate (M.D.) College of Medicine, Dongguk University
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2011-2015	Mastered Postgraduate School College of Medicine, The Catholic University of Korea, Seoul, General Surgery (Ph.D.)

Professional Experience

2002-2003	Internship at St. Mary's Hospital, Catholic University of Korea
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2011-2012	Clinical Fellow in division of Coloproctology, Department of Surgery, Uijeongbu St. Mary's Hospital, Catholic University of Korea
2012-2017	Clinical Assistant Professor in Department of Surgery, Uijeongbu St. Mary's Hospital
2017-2019	University of Texas, Health Science Center at Houston
2017-Present	Clinical Associate Professor in Department of Surgery, Uijeongbu St. Mary's Hospital

Clinical Outcomes and Techniques of Robotic Ventral Rectopexy Using Biologic Mesh

Jae Im LEE

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Robotic ventral rectopexy (RVR) has emerged as a promising technique in the surgical management of rectal prolapse. Compared to laparoscopic ventral rectopexy (LVR), RVR offers several distinct advantages. The robotic platform provides enhanced dexterity, precision, and visualization, which are crucial in the delicate dissection and suturing involved in rectopexy. These benefits translate into improved clinical outcomes, such as reduced operative time, lower complication rates, and faster postoperative recovery. Moreover, RVR has shown to reduce the learning curve associated with minimally invasive rectopexy, thereby increasing its accessibility to surgeons.

Another critical consideration in ventral rectopexy is the choice of mesh. The use of biologic mesh, as opposed to synthetic mesh, has gained traction due to its superior biocompatibility and reduced risk of infection and erosion. Biologic mesh integrates well with host tissues, leading to lower rates of chronic pain, mesh-related complications, and better long-term outcomes. This is particularly important in patients with a higher risk of infection or those who may require future surgical interventions.

This lecture will summarize the current evidence supporting these advantages and discuss the practical implications for improving patient outcomes in rectal prolapse surgery.

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Education

2005	MBBS (HKU)
2012	FRCS (Edin), FHKAM (Surgery), FCSHK

Professional Experience

Consultant, Division of Colorectal Surgery, Prince of Wales Hospital

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Professional Experience

2011-2012	Internship, Kyungpook National University Hospital
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2016-2019	Army Surgeon, Armed Forced Medical Research Institute
2019-2021	Fellow, Colorectal Cancer Center, Kyungpook National University Chilgok Hospital
2022-Present	Assistant professor, Department of Surgery, Kyungpook National University

Beyond local response: Assessing systemic impacts in pathologic complete response in locally advanced rectal cancer

Seung Ho SONG

Kyungpook National University, Korea

Introduction:

The role of radiation therapy in managing locally advanced rectal cancers has evolved over the years. This study aimed to investigate the long-term oncological impact of patients achieving a pathological complete response (pCR) following preoperative chemoradiotherapy (CRT) compared to those who did not achieve pCR and did not receive preoperative CRT in locally advanced rectal cancer.

Methods:

This retrospective comparative study included three patient cohorts: Group A (no preoperative CRT), Group B (preoperative CRT without pCR), and Group C (preoperative CRT with pCR). Data from two distinct periods were analyzed, one before and one after the routine implementation of preoperative CRT. Various clinical and oncological parameters were evaluated.

Results:

The study included 1,105 patients, distributed across three groups: Group A included 608 patients, Group B consisted of 407 patients, and Group C comprised 90 patients. Group C demonstrated significantly better 5-year overall survival (96.1%) compared to Group B (81.7%) and Group A (77.6%). Local recurrence rates were significantly lower in Group C (98.8%) compared to Group A (90.1%). Group B showed comparable survival rates to Group A but with significantly reduced local recurrence.

Conclusions:

Patients who achieving pCR following preoperative CRT for locally advanced rectal cancer demonstrated improved long-term survival and lower rates of local recurrence. In contrast, patients who did not achieve pCR following preoperative CRT showed similar survival rates to those who did not receive preoperative CRT, albeit with better local control.

Room 3

[Colorectal Cancer] Chemotherapy for the Colorectal Surgeon

Chairs

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Nak-Song SUNG
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2010-2013	Mandatory Military Service as Public Health Doctor

Professional Experience

2013-2014	Fellowship, Division of Colorectal Surgery, Department of Surgery, Konyang University Hospital, Daejeon, Korea
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2021-2022	Visiting Scholar, Moffitt Cancer Center & Research Institute, Tampa, Florida
2015-Present	Associate professor, Division of Colorectal Surgery, Department of Surgery, Konyang University Hospital, Daejeon, Korea

Adjuvant chemotherapy for resected oligometastatic CRC

Nak-Song SUNG

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Oligometastatic disease(OMD) was first described by Hellman et al. in 1995 to describe a clinical state of intermediate metastatic disease limited to localized cancer and wide-spread metastatic disease, which was mentioned to justify the use of an aggressive local treatment in conjunction with systemic therapy in selected patients as a curative treatment approach. it refers to one to five metastases that are curable, with an overall survival rate of 20-50%. The management of OMD has evolved dramatically in recent years, driven by advances in surgical techniques, increased use of targeted agents, and improvements in perioperative care.

Clinical guidelines released by NCCN, ESMO generally recommend 6 months of adjuvant chemotherapy after surgical treatment of OMD, but the exact efficacy of adjuvant chemotherapy(ATC) still remain unclear due to limitations such as heterogeneity, small patient numbers, and different regimens of the studies.

The most common organs to which colorectal cancer metastasizes are in the order of the liver, lungs, and peritoneum, The effect of ATC on resected liver OMD is the most studied. The effectiveness of adjuvant chemotherapy after curative resection in liver metastases has been shown to improve recurrence free survival, but the benefit on overall survival is uncertain. The presence of lymph node metastases at the time of surgery, high CEA level, and number of metastases are better known to be prognostic factors than chemotherapy.

There are fewer studies on lung metastases and/or peritoneal metastases but similar results that advantage of adjuvant chemotherapy(ACT) was unclear were observed.

Given the small number of patients included in most studies and the fact that most of the studies were analyzed before genetic analysis and ctDNA were available for clinical use, it seems that well-designed & large prospective studies are needed.

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Education

1998	Doctor of Medicine, The Catholic University of Korea, Seoul, Korea
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Professional Experience

1998-1999	Internship in Seoul St. Mary's Hospital, The Catholic University of Korea
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2006-2009	Clinical Fellow, Division of Colorectal Surgery, Department of Surgery, Seoul St. Mary's Hospital, The Catholic University of Korea
2009-2019	Assistant Professor, Associate Professor, Professor, Department of Surgery, St. Vincent's Hospital, The Catholic University of Korea
2019-Present	Professor & Chairman, Department of Surgery, Eunpyeong St. Mary's Hospital, The Catholic University of Korea

Conversion chemotherapy for borderline mCRC

Hyung Jin KIM

The Catholic University of Korea, Korea

Approximately 50-60% of patients diagnosed with colorectal cancer develop metastases, and 80-90% of these patients have unresectable metastatic liver disease. Studies of selected patients undergoing surgery to remove colorectal metastases have shown that cure is possible and should be the goal for these patients. Preoperative systemic therapy is being increasingly considered in selected cases to downsize colorectal metastases and convert them to a resectable status. There is strong correlation between response rates of chemotherapy and the resection rate of metastases. Not only response rates, early tumor shrinkage, depth of response are also important to increase resection rates. To increase response rates and resection rates, FOLFIRINOX is an option, and bevacizumab and cetuximab could be added to FOLFOX or FOLFIRI regimens. However, oxaliplatin and irinotecan based chemotherapeutic agents may cause liver injury and is associated with morbidity and complications following hepatectomy. To limit the development of hepatotoxicity, it is recommended that surgery be performed as soon as possible after the patient's disease becomes resectable. Therefore, evaluation for conversion to resectable disease should be planned every 2 months.

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Master degree, Graduate School, CHA University, Republic of Korea

Professional Experience

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Chemotherapy and targeted therapy for BRAF mutant mCRC

Sungwoo JUNG

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Background

Colorectal cancer (CRC) is the third most commonly diagnosed cancer and the second leading cause of cancer-related deaths globally. Among metastatic colorectal cancer (mCRC) patients, approximately 5-10% present with BRAF mutations, predominantly the BRAF V600E mutation, which confers a worse prognosis compared to BRAF wild-type counterparts. BRAF mutations are associated with aggressive disease progression, poor response to standard treatments, and lower overall survival (OS). This review aims to synthesize the latest advances in chemotherapy and targeted therapy for BRAF mutant mCRC, focusing on combination strategies, novel agents, and emerging treatment paradigms.

Conventional Chemotherapy: Challenges and Limitations

Standard chemotherapy regimens for mCRC, such as FOLFOX (5-fluorouracil, leucovorin, and oxaliplatin) and FOLFIRI (5-fluorouracil, leucovorin, and irinotecan), form the backbone of first-line treatment. However, BRAF mutant mCRC patients often experience suboptimal outcomes with these regimens. Studies have demonstrated that median progression-free survival (PFS) and overall survival (OS) are significantly shorter in BRAF mutant mCRC compared to non-mutant cases, with median OS often less than 12 months despite aggressive chemotherapy [1, 2]. This stark contrast underscores the urgency for integrating more effective therapeutic approaches.

Targeted Therapy and Combination Approaches

The use of single-agent BRAF inhibitors, such as vemurafenib, has shown limited efficacy in mCRC due to rapid feedback activation of the EGFR pathway, leading to resistance [3]. To overcome this challenge, combination targeted therapies have been explored. The triplet regimen of BRAF inhibitor encorafenib, MEK inhibitor binimetinib, and EGFR inhibitor cetuximab has shown significant improvement in clinical outcomes. The BEACON CRC Phase III trial reported that this triplet combination therapy resulted in a median OS of 9.3 months compared to 5.9 months with standard chemotherapy, and improved objective response rates (26% vs. 2%) [4, 5].

Another pivotal trial, the SWOG S1406 trial, investigated the combination of vemurafenib with cetuximab and irinotecan, demonstrating enhanced PFS and OS over standard therapy, further supporting the rationale for combining BRAF inhibitors with other targeted agents to block multiple oncogenic pathways simultaneously [6].

Emerging Therapies and Ongoing Trials

Recent advancements have introduced new potential therapeutic combinations and novel agents targeting the MAPK/ERK pathway, PI3K/AKT/mTOR pathway, and others. Clinical trials are currently evaluating the efficacy of BRAF inhibitors combined with checkpoint inhibitors (e.g., pembrolizumab) to harness the immune response against BRAF mutant tumors [7]. Additionally, the role of liquid biopsy for detecting BRAF mutations and monitoring therapeutic response is under investigation, potentially allowing for real-time adaptation of treatment strategies [8].

The ANCHOR CRC trial is exploring first-line use of encorafenib, binimetinib, and cetuximab, aiming to assess their efficacy and safety in previously untreated BRAF mutant mCRC patients [9]. Meanwhile, preclinical studies are identifying synergistic effects of novel drug combinations, such as dual inhibition of BRAF and CDK4/6, which could offer additional therapeutic avenues [10].

Immunotherapy Approaches

While BRAF mutant mCRC is typically resistant to immunotherapy due to low tumor mutational burden and immune desert phenotype, combination strategies involving targeted therapies and immune checkpoint inhibitors are being actively investigated. Trials combining BRAF/MEK inhibitors with PD-1/PD-L1 blockers have shown promising preclinical results, suggesting a potential avenue for enhancing immune recognition and response in BRAF mutant mCRC [11].

Conclusion

BRAF mutant mCRC presents unique challenges due to its aggressive nature and resistance to standard treatments. Recent advances in targeted therapy combinations, particularly those involving BRAF, MEK, and EGFR inhibitors, have led to improved survival outcomes and are reshaping the treatment landscape. Emerging therapies, ongoing clinical trials, and the integration of immunotherapy offer hope for further advancements. Continued research to refine therapeutic combinations, identify predictive biomarkers, and personalize treatment is critical for improving outcomes for patients with BRAF mutant mCRC.

Keywords

BRAF mutant, metastatic colorectal cancer, chemotherapy, targeted therapy, BRAF inhibitors, MEK inhibitors, EGFR inhibitors, BEACON CRC, immunotherapy, combination therapy, liquid biopsy.

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8. Siravegna G, et al. (2019). Liquid biopsy for cancer therapy monitoring. Science, 362(6418), 1177-1181.
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11. Ascierto PA, et al. (2021). Combination of targeted therapy and immunotherapy in melanoma and beyond. Journal for ImmunoTherapy of Cancer, 9(1), e001419.

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Professional Experience

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2021-Present Senior Researcher, Cancer Metastasis Research Group, National Cancer Center
2021-Present Senior Researcher, Treatment Resistance Research Group, National Cancer Center
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Clinial use of liquid biopsy in CRC treatment

Sae Won HAN

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Circulating-tumor DNA (ctDNA), which is found in the bloodstream as a fragmented cell-free DNA (cfDNA), can reflect the genomic landscape of the tumor in a non-invasive manner. It is readily detectable in the majority of metastatic colorectal cancer and ctDNA sequencing can provide a real-time mutational profile of the entire tumor that can assist treatment decisions. However, detection of ctDNA originating from minimal residual disease (MRD) after curative treatments in the earlier stage patients requires a more sensitive and robust assay technology than ctDNA analysis of metastatic disease. The amounts of ctDNA from MRD burden below the detection limit of imaging modalities are very scarce and the strategies used for molecular profiling in metastatic patients cannot capture them in most cases. Enhanced sensitivity driven by technological advances has enabled the detection of a trace amount of ctDNA originating from MRD in solid tumors.

The presence of MRD determined using ctDNA analysis has been suggested as an important prognostic biomarker. MRD status after curative treatment was significantly associated with higher recurrence in multiple studies using various ctDNA assay technologies. Moreover, a recent prospective clinical trial showed the possibility that ctDNA-guided adjuvant chemotherapy in stage II colon cancer could reduce unnecessary chemotherapies without compromising survival outcomes. Multiple ongoing prospective clinical trials are evaluating the clinical utility of ctDNA MRD assessments for personalized adjuvant chemotherapy strategy.

Room 4

[AFSR, KAWOCN, and KSCP_WOSG]
Session 1. Enterocutaneous Fistula Management and Case Presentation

Chairs

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Kazue YOSHIDA Yokkaichi Nursing and Medical Care University, Japan

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Education

2011	STUDENT NURSE, BLOOMFIELD COLLEGE
	Full Scholarship by government
	Nurse student At St Claire Hospital in New Jersey
2012	BACHELOR'S DEGREE, CHOSUN NURSING COLLEGE
2016	WOC NURSE COURSE, CLEVELAND CLINIC
	8 weeks course completion of WOC curriculum
2018-2020	MASTER´S DEGREE, GRADUATE SCHOOL OF HANYANG UNIVERSITY
	Major: Clinical Nursing

Professional Experience

2012-2017	NURSE | MICU, SICU, CCU
2017-2021	WOUND OSTOMY NURSE | GASTOINTESTINAL CANCER CENTER
2021-Present	WOUND OSTOMY CHARGE NURSE | WOUND OSTOMY NURSING TEAM

Overview of Entercutaneous Fistula

Songun GU

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When ECF occurs, medical staff and patients have a hard time. Because there are two reasons. First it's hard to heal. Second it's hard to care. Therefore, accurate treatment can be performed only when the exact cause is found and classification.

Fistula is derived from Latin word that means "PIPE". A Fistula is an abnormal connection between two epithelized surfaces. Fistulas that involve Gut and Skin are called "ENTEROCUTANEOUS FISTULA(ECF)"

Historically the first known ECF reported in the literature in 1822. St martin was a Canadian voyageur. On June 6, 1822. St martin was accidentally shot with a musket when he was 20. The charge of the gun shot left a hole through his side that healed to form a fistula aperture into stomach. US army surgeon William beaumount was treated him. And He can study digestion experiments. After 58 years later not 58 years old he dead.

Several classification systems for fistulas exist, none of which are used exclusively. The 3 most commonly used classification system are anatomic, physiologic, Etiologic classification. Used in combination theses classification can help to provide an integrated understanding and optimal management scheme of fistula

Identification of the anatomic site of origin of external fistulas may provide further information on the etiology and likelihood of closure of the fistula. ECF can divided esophageal fistula, Gastric fistula duodenal fistula, small bowel fistula, colonic fistula.

Physiologic classification is determined by amount of daily output: If it comes out more than 500ml a day, it is called high output. It has a high mortality rate and is difficult to spontaneous closure. In 1950s mortality rate was high, almost 50% but now it is 5 to 15 %

ECF may be classified as Postoperative or spontaneous. Approximately 75% of fistulas occur following an operation. Patient factors that increase ECF after surgery include emergency surgery, infection, Malnutrition

- An understanding of the pathophysiology and risk factors for development of these fistulas may minimize their creation as well as provide a sound plan for their management ECF management is a challenge that requires a multidisciplinary team(MDT) as an approach to achieve an optimal clinical output

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Education

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Management Process of Enterocutaneous Fistula according to Underlying Diseases: a. Crohn's Disease, b. Surgical Factors, c. Radiation, d. Comorbidity, e. Other Factors

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Enterocutaneous fistula (ECF) is a challenging clinical condition characterized by an abnormal connection between the intestinal tract and the skin. Managing ECF is complex and varies significantly depending on the underlying disease.

The initial step in managing ECF involves a thorough assessment of the patient's condition, including identifying the underlying disease. Common underlying conditions include Crohn's disease, malignancies, and postoperative complications. Each of these conditions requires a tailored approach to management.

In patients with Crohn's disease, conservative management is often prioritized. This includes nutritional support, immunosuppressive therapy, and careful monitoring of the patient's condition. The goal is to promote spontaneous closure of the fistula while minimizing complications.

For ECFs associated with malignancies, a more aggressive approach may be necessary. Surgical intervention is often required to remove the tumor and repair the fistula. This is typically accompanied by adjuvant therapies such as chemotherapy or radiation therapy to address the underlying malignancy.

Postoperative ECFs present a unique set of challenges. These cases often require a multidisciplinary approach, involving surgeons, infectious disease specialists, nutritionists, and other healthcare professionals. Key components of management include infection control, nutritional support, and timely surgical intervention. The use of advanced wound care techniques, such as negative pressure wound therapy, can also be beneficial in promoting healing.

Throughout the management process, early diagnosis and prompt intervention are critical. The success of ECF management is closely linked to the adequacy of initial resuscitation, the appropriateness of the chosen therapeutic strategy, and the patient's overall health status. Regular monitoring and follow-up are essential to ensure optimal outcomes.

In conclusion, the management of ECF requires a comprehensive and individualized approach that considers the underlying disease. Early diagnosis, appropriate nutritional support, infection control, and a multidisciplinary team are essential components of successful ECF management.

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Education

2004-2007 Daejeon Institute of Science And Technology. Department of Nursing
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Professional Experience

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Enterocutaneous Fistula Case Presentation. 1

Heyran LEE

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Enterocutaneous fistula is an abnormal connection between the gastrointestinal tract and skin. Fistulas can form between any two hollow spaces including blood vessels, intestine, vagina, bladder, and skin. Enterocutaneous fistulas most commonly occur as a surgical complication, but can also occur due to trauma, malignancy, inflammatory bowel disease, or ischemia.

Successful management of patients with Enterocutaneous fistula requires the establishment of controlled drainage, management of sepsis, prevention of fluid and electrolyte depletion, protection of the skin, and provision of adequate nutrition. In particular, the drainage discharged from the fistula is variable in secretion and contains a large amount of digestive fluid, which irritates the skin around the fistula and increases damage.

Therefore, WOCN should select and apply appropriate methods for accurate evaluation of secretions, peripheral skin care, drainage management, and emotional support for patients and caregivers.

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2002-2005	Diploma in Nursing, Nanyang Polytechnic, Singapore
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Disclosure

I have no personal or financial interests to declare.

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- Full suite of integrated healthcare services from **Primary care via Parkway Shenton to Quaternary care in our hospitals**
- Growing our diagnostic business, Parkway Laboratories and Parkway Radiology
- Parkway MediCentre welcomes its first patient on 18 May 2023
- Mount Elizabeth Fertility Centre opens its doors at Heeren in March 2024
- Mount Elizabeth Proton Therapy Centre celebrates it's official opening & first anniversary in May 2024
- Parkway Shenton launches its new Home Care services in May 2024
- Ongoing preparation for a new Transition Care Facility @ Changi

Radiography Procedure at Gleneagles Hospital

Outline

- Patient Information
- Past Medical/Surgical History
- Issues
- Management of Enterocutaneous Fistula (ECF)
- Summary

Patient Information

- 58 years old
- Chinese female
- Married with one son
- Presented with recurrent PV (Per Vagina) discharge

Medical and Surgical History

Feb 2022

- Diagnosed metastatic carcinoma of appendix
- Underwent Total Hysterectomy and Bilateral Salpingo-Oophorectomy (THBSO) & appendicectomy
- Histology showed signet ring adenocarcinoma likely colon origin. K-ras was mutant, Her2 negative and Microsatellite Stable (MSS). Tumor Mutation Burden (TBM) was 5. Underwent 1 cycle of XELOX, requested to stop due to side effects.

Oct 2022

- Developed recurrence, PET scan showed extensive disease. Given 1 cycle of FOLFIRINOX then developed IO (Intestinal Obstruction).
- Needed bowel surgery to relieve of intestinal obstruction.

Medical and Surgical History (Cont'd)

7 Nov 2022

- Bypass and ileostomy surgery done. At the same time had DJ stents bilaterally for obstructive uropathy.
- Was given Keytruda and Continuous Infusion (CI) 5FU; Unfortunately patient tolerated chemotherapy poorly. In view of poor tolerance to chemotherapy, admitted for chronomodulated FOLFOX, subsequently with good radiological and biochemical response.

Jul 2023

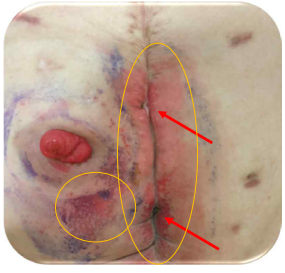
- Underwent attempt for CRS HIPEC (Cytoreductive Surgery) (Hyperthermic Intra-Peritoneal Chemotherapy), attempt aborted due to peritoneal disease and dense adhesions. Developed ECF (Enterocutaneous Fistula) from laparotomy wound and started on Total Parental Nutrition (TPN).

Progress and Management

- Managed conservatively after discussion with patient and family
  - NBM (Nil By Mouth)
  - IV antibiotics
  - IV TPN
- Improved with conservative management
- Succession with slow escalation of feeds
- Well upon discharge

Chief Complain

- Patient was referred for outpatient fistula management one month after discharge from hospital (31 Oct 2023) due to persistent leakage and skin erosion due to fistula output.



Management Plan of the Fistula

- Currently self-managed with gauze, change every 2 hours even during night.
- Discussed with patient to apply pouching but refused as pouching method did not work previously during admission.
- Decided to try out single use negative pressure system dressing, the goal is to contain the fistula output, protect the skin and promote spontaneous fistula closure if possible.

Management Plan: Skin Barrier

- Skin site protected with polymeric-cyanoacrylate and silicone film.

- Stoma site pouched with 2-piece convex stoma wafer.

Management Plan: Containment

- Fistula wound site applied with single use negative pressure system which shares fluid management between an absorptive multi-layered dressing and an 50ml canister.

1st Nov 2023
The dressing managed to contained for one day.
Home visit arranged for patient, new set of dressing applied.

The canister almost full in one day, due to faecal matter, the machine on and off showed blockage.

- Changed to bigger size of foam dressing.
- Patient was reviewed at clinic every 3 days.
- Dressing change daily and every other day with home support.

Outcomes with Single Use Negative Pressure System

- Applied for 2 weeks, only can contain the fistula output for 1 day.
- Skin site improved with the protection.
- Spontaneous closure of the fistula at the umbilical site.

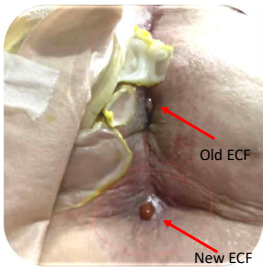
31st Oct 2023

9th Nov 2023

13th Nov 2023

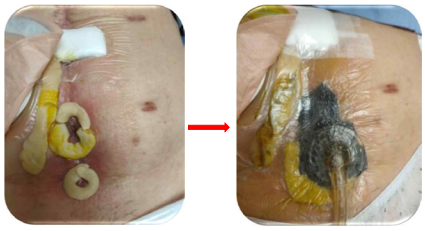
New Findings

- On 13 Nov 2023, new ECF opening in the inferior aspect of wound.
- No sepsis or peritonitis
- CT scan showed collection in the abdominal wall connected to the fistula opening, and underlying bowel.



Management Plan Reviewed

- Applied conventional negative pressure wound therapy dressing with granufoam
  - Provide stronger suction
  - Apply the granufoam at the fistula wound opening
  - Not to pack the granufoam inside



Subsequent Follow Up

- Patient had the conventional negative pressure wound therapy dressing changed twice a week at clinic and prn home support if leakage occurred.
- Dressing applied for about 3 weeks to 4 Dec 2023 and off as there was not much output from the fistula wound site.

Wound Picture taken on 20 Nov 2023
The new ECF over inferior aspect site closing off

New Issues

- On 11th Dec 2023, admitted for recurrent vomiting for 1 week.
- Clinically was dehydrated, abdomen soft with midline enterocutaneous fistula x2.
- CT scan **did not show intestinal obstruction**
- Gastrograffin follow through showed **obstruction** at the **duodenal jejunal junction**

Treatment Plans

- NG kangeroo tube inserted to aspirate gastric contents
- Maintained on TPN
- Duodenal stent attempted but unsuccessful
- Opinion from 2 surgeons, not amenable for surgery
- Offered chemotherapy but patient refused
- Home with palliative care referral on 27th December 2023

Last Review with Patient

- Nil much output from the fistula and stoma due to the obstruction.
- Fistula site cleansed with normal saline, covered with gauze, change daily and prn when soiled.

Summary

- Enterocutaneous fistula (EUS) is a challenging complication.
- Multidisciplinary management involving surgery, nutrition and wound care is crucial for optimal outcomes.

Room 1

[Rectal Cancer]
Dilemmas & Debates in Colorectal Surgery – Organ Preservation for Rectal Cancer

Chairs

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DEBATE TOPIC 2: T2N0 Rectal Cancer TME (pros) or nCRT

Jin KIM

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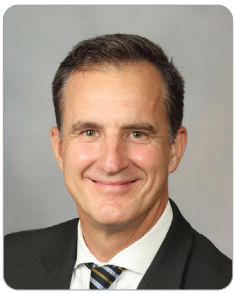
Total Mesorectal Excision (TME) is preferred for treating T2N0 rectal cancer due to its superior oncological outcomes, comprehensive treatment approach, and reduced recurrence rates. TME is the gold standard for rectal cancer surgery, offering excellent local tumor control and high survival rates. The procedure involves the complete removal of the mesorectum, ensuring the elimination of potential microscopic disease and minimizing recurrence risks. Compared to alternative treatments like chemoradiotherapy and local excision (CRT + LE), TME provides more reliable long-term survival outcomes, despite the higher potential for functional impairment. While CRT + LE may offer similar survival rates, it is often associated with increased toxicity and complications. Although TME can impact quality of life due to possible bowel dysfunction, its effectiveness in reducing recurrence and improving survival makes it the preferred choice for T2N0 rectal cancer. The decision to opt for TME balances the risk of recurrence against potential quality of life impacts, emphasizing its role as a definitive treatment option.



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He earned his medical degree from the University of Minnesota and completed his General Surgery Residency and Colon and Rectal Surgery Fellowship at Mayo Clinic.

Dr. Dozois is board certified in General Surgery and Colon and Rectal Surgery. He is a fellow of the American College of Surgeons and the American Society of Colon and Rectal Surgeons. He is a member of the American Surgical Association.

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DEBATE TOPIC 2:
T2N0 Rectal Cancer TME or nCRT (pros)

Eric J. DOZOIS

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Organ-sparing Approach to T2N0 Rectal Cancer using Neoadjuvant Chemoradiotherapy

Treatment for rectal cancer continues to be an evolving paradigm with new data emerging at a rapid rate. In recent years, there has been an intense interest in organ-sparing approaches that include neoadjuvant chemoradiotherapy (nCRT). The impetus to study organ-sparing strategies is driven by the morbidity associated with transabdominal total mesorectal excision (TME) which includes sexual, urinary and defacatory dysfunction and in some cases a permanent colostomy, leading to poor QOL.

Currently, for patients with cT2N0 rectal cancer, most national and international guidelines, recommend a transabdominal approach with TME to achieve the best oncologic outcomes. These recommendations are in response to studies that have demonstrated a high risk of local recurrence (LR) when patients undergo LE alone for these lesions (19%-47%). Recent trials have evaluated oncologic outcomes, operative morbidity and patient-related quality of life (PRQOL) in patients with distal cT2N0 rectal cancer treated with and organ sparing approach.

Oncologic Outcomes, operative morbidity and HRQOL

In a prospective randomized trial by Lezoche et. al. (Italy), 40 patients (20 in each arm) with cT2N0 low < 3cm rectal cancers underwent long-course nCRT and then were randomized to LE (arm A) or laparoscopic TME (arm B). Tumor downstaging was observed in both groups, 65% in arm A (7 were ypT0) and 55% in arm B (11 were ypT0). Four patients in the Lap TME group had APR. At a median FU period of 56 mos, one LR was noted in each arm. The probability of local or distant failure was 10% for LE and 12% for Lap TME. The probability of survival was 95% for LE and 83% for Lap TME. Morbidity was higher in the Lap TME group and included higher blood loss, anastomotic leak (2) and longer length of stay by 3 days.

In 2015, organ preservation for patients with cT2N0 distal rectal cancer using nCRT and LE, was studied (ACOSOG Z6041 Trial, United States) by Garcia-Aguilar and colleagues. This was a single-arm, multi-institutional, phase II trial. Neoadjuvant treatment included capecitabine, oxaliplatin and long-course radiation. 79 patients were enrolled and had nCRT. Two patients had no surgery, and one had a TME. Four additional patients completed nCRT but 1 had a positive margin and 3 had ypT3 tumors. Thus, 72 patients met protocol criteria. Median FU was 56 mos. Of the 77 patients that had surgery, 38 (49%) had ypT0 or yPTis. The estimated 3-Y DFS for the intention-to-treat group was 88.2% and for the per-protocol group 86.9%. Of the 79 eligible patients, 23 (29%) had grade

3 & GI adverse events, 12 (15%) had grade 3-4 pain, and 12 (15%) had grade 3-4 hematological adverse events while getting chemoradiation. Of the 77 who had surgery, 6 had grade 3 pain, 3 had hemorrhage and 3 had GI adverse events.

In 2017, the GRECCAR 2 phase III study (France), a prospective RCT of patients with cT2,T3N0-1 low rectal cancers, 4cm or less, aimed to compare LE and TME in patients with a good response after long-course nCRT. Those that were considered "good responders" (scar < 2cm) were randomized to either LE or TME. After LE, if pathology showed ypT2,T3 or R1, they went on to completion TME. 186 patients had nCRT and 148 were considered good responders and randomized. Ultimately, 74 patients underwent LE (55% were T2) and 71 had TME. In the LE group, 26 patients went on to completion TME. Pathological complete response was seen in 40%. For the entire cohort, the 3-year oncologic outcomes (LR, DFS, OS) for patients who underwent LE was similar to those gettingTME. Major morbidity or adverse effects were experienced in 78% of patients who had LE + completion TME, compared with 29% of patients who had LE alone and 38% in those who had only TME after nCRT.

In 2019, the CARTS phase II study (Netherlands) aimed to evaluate long-term oncologic and functional outcomes in patients with cT1-3N0M0 rectal cancers who undergo nCRT followed by LE. Health-related QOL (HRQOL) was assessed with EORTC QLQ C30 and FR 38 questionaires in addition to a LARS questionaire. Eight weeks after completion of nCRT, patients with significant downsizing (ycT0-2) were offered LE. If after LE, if path showed ypT2-3, TME was recommended. Following nCRT, 47 patients underwent LE. Of the 47 patients, 35 (74%) were successfully treated with LE alone. TME was done in 16 patients (4 with inadequate responses, 8 had completion TME after LE and 4 with salvage for LR). Ultimately, 40% were found to have a complete pathological response. The actuarial 5-year LR rate was 7.7%, with 5-year DFS and OS rates of 81.6% and 82.8%, respectively. HRQL during follow up was equal to baseline, with improved emotional well-being in patients treated with LE but elevated anxiety if a pathological complete response was not acheived. Major, minor and no LARS was experienced in 50%, 28% and 22%, respectively, of patients with successful organ preservation.

In 2021, the TREC Trial (UK), patients with Stage I, II low rectal cancers, < 3 cm, were randomized to short course CRT + LE vs. TME. Short-term outcomes were assessed as well as HRQOL with EORTC QLQ C30 and CR29. In the LE group, if histologic features associated with LR were found, TME was recommended. 55 patients were randomly assigned (27 organ preservation, 28 to radical surgery). 30% of randomly assigned to organ preservation underwent TME. Serious adverse events occurred in 15% of LE patients and 39% of TME patients. 30% of patients assigned to LE had a complete pathological response. Overall, 70% of patients assigned to LE achieved organ preservation. Patients randomly assigned to organ preservation showed improvements in patient-reported bowel toxicity and QOL and functional scores in multiple items compared to those who had TME which was sustained over a 36-month period. Oncologic outcomes will be reported in the STAR-TREC trial.

In 2023, Lynn and colleagues compared oncologic long-term and short-term surgical outcomes between patients with distal cT2N0 rectal cancer treated with CRT + LE and patients treated with only TME (no radiation). 79 patients with cT2N0 rectal cancer treated in the ACOSOG Z6040 trial were compared to a cohort of 79 patients with pT2N0 tumors treated with upfront TME in the Dutch TME trial. Survival, short-term outcomes, and health-related QOL were compared between groups. Three patients (4%) in the CRT + LE group required APR compared to 31 (40%) in the TME group. Forty TME patients required a permanent stoma. CRT-related toxicity occurred in 43% of the nCRT patients; however, TME patients had a higher rate of complications requiring reoperation (1%

vs. 9%). 5Y DFS was similar in both groups, 88.2% vs 88.3% and OS 90.3% vs. 88.4%. Compared to baseline, in both groups, patients with sphincter preservation had worse HRQOL scores 1 year after surgery.

In a recent systematic review (9 studies) of long-term oncologic outcomes of neoadjuvant therapy followed by LE for T2N0 rectal cancer, the pooled 5Y DFS, 5Y OS, and local and distant recurrent rates were 91.3%, 72.6%, 4% and 4.9%, respectively. Complete pathological response (ypT0) rate ranged from 26.7% - 59%.

In 2022, the phase II NEO Trial (Canada) aimed to determine the outcomes and organ-sparing rate in patients with early-stage rectal cancer treated with neoadjuvant chemotherapy (no radiation) followed by LE. 58 patients with cT1-T3abN0 low or mid rectal cancer were treated with 3 months of chemotherapy (FOLFOX or CAPOX). Those with evidence of response proceeded to LE. 33/58 patients (57%) had tumor downstaging to ypT0/T1n0/X on the surgical specimen, resulting in an intention-to-treat organ-preserving rate of 57%. Of the 23 remaining patients recommended TME, 13 declined and elected to proceed to observation, resulting in a 79% organ-sparing rate. The remaining 10/23 patients proceeded to TME and 7 were found to have no histological residual disease. The one- and two-year locoregional relapse-free survival was 98% and 90%, respectively. There was no distant recurrences or death.

Based on recent trial data, some patients with small, low, T2N0 rectal cancers will do well with an organ-sparing approach that incorporates neoadjuvant CRT or just chemotherapy plus LE. Though not studied in these trials, a high number of patients had a pathological complete response and may have been candidates for a watch and wait pathway. Long-term oncologic outcomes data are limited currently but short-term oncololgic results suggest that cancer-specific outcomes are similar to TME in selected patients. The overall complication profile with LE is less than TME, but radiation still has a negative impact on bowel, bladder and sexual function. Data on use of neoadjuvant chemotherapy plus or minus LE as an organ sparing pathway is limited, but data from the NEO trial suggests that some patients may be able to avoid radiation as part of a neoajuvant pathway which should reduce bladder, sexual and bowel dysfunction.

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Education

MBBCH and Masters degree in Surgery, Suez Canal University - Egypt
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More than 60 peer reviewed publications
Several book chapters

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He also is a member of the European Association of Endoscopic Surgery.
He is active in minimally invasive colorectal surgery, including laparoscopic , robotic and transanal procedures. Along with the team in Genk, Joep has conducted many workshops on minimally invasive techniques.

He has published multiple manuscripts on and is very much involved in the safe implementation of MIS.

Joep is National coordinator for AIS-channel and also co-founder of the iLappSurgery Foundation. The goal of this foundation is to develop online training modules in the field of minimal invasive surgery and to make such material available worldwide in the form of online modules.

DEBATE TOPIC 3:
TATME versus Robotic Surgery for low rectal cancer. My way is the best (Robotic surgery)

Joep KNOL

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Although TME remains the gold standard for curative rectal resection recently much attention has been given to further improving oncological results by implementing new techniques. The literature to date show that much gain can be achieved for the dissection of the most distal third of the rectum, an area with the highest risk of threatening the completeness of the circumferential resection margin.

Quality of the resection and the specimen are mainly determined by maneuverability deep down in the pelvis. In male patients, who require the majority of rectal resections, the mid pelvis is often the narrowest part of the bony structures, resulting in an hourglass-shaped working space.

While measuring distances within the bony pelvis gives an impression of access to the pelvic floor, many other factors contribute to reducing the working space, like size of the tumor, volume of the mesorectum, and size of the prostate in male patients. Other factors that contribute to an increasing level of difficulty of low rectal dissection are high body mass index, time interval after radiotherapy, anterior location of the tumor, and distance between lower border of the tumor and anorectal junction. When all of these factors are present, an optimal dissection is challenging, requiring an expert in rectal cancer surgery, optimally trained in different techniques and performing each on a regular base.

Recently robotic surgery and transanal surgery have been developed to overcome the limitations of conventional open and laparoscopic surgery for rectal cancer.

Compared with laparoscopic surgery, the robotic system has theoretical advantages of being a stable optic platform , with all moves fully controlled by the surgeon with articulating instruments. These features potentially allow better visualization and maneuverability, even in the lower pelvis. As in all advanced surgical procedures a whole learning curriculum is required with simulation training and proctoring during first cases. By performing other colorectal procedures like a sigmoid resection and rectopexie, the learning curve is shortened.

Transanal TME (taTME) is a different concept to treat mid and low rectal cancer. The difference with pure transabdominal techniques is that dissection of the distal third of rectum and mesorectum, the most difficult part of the TME procedure, is performed through the anus. Much attention has to be given on recognition of anatomical structures from below, as well as on pitfalls specifi-

cally for the technique; in male patients, the urethra is at risk in dissection under the level of the prostate and reanastomis has to be performed on an open rectal stump. Main benefits of the taTME are better visualization of the anterior part of distal rectal dissection, more precise judgement on DRM, and avoidance of imperfect stapling of the distal rectum. Because taTME differs in many aspects from the transabdominal techniques, a validated training pathway has to be followed.

However the technique seems to be more difficult to standardize and much experience is required to achieve good results. Therefore the procedure should probably be limited to high volume centers.

Room 2

[IBD Study Group]
Optimal treatment for Crohn's stricture

Chairs

Jae Kyun JU Chonnam National University, Korea

Emre BALIK Koc University School of Medicine, Türkiye

Takayuki YAMAMOTO
Yokkaichi Hazu Medical Center, Japan

Education

1989	M.D., Mie University School of Medicine
1996	Ph.D. Mie University

Professional Experience

1989-1991	Resident, Second Department of Surgery, Mie University School of Medicine
1991-2001	Medical Staff, Second Department of Surgery, Mie University School of Medicine
1997-1998	Research Fellow, Department of Surgery, The University of Birmingham, Queen Elizabeth Hospital, Birmingham, UK (Professor Michael R.B. Keighley)
2001-Present	Chief, Department of Surgery & Inflammatory Bowel Disease Center, Yokkaichi Social Insurance Hospital
2005-2006	Research Fellow, Department of Colorectal Surgery, The Cleveland Clinic Foundation, Ohio, US (Dr. Victor W. Fazio)
2009-Present	Clinical Professor, Mie University School of Medicine
2022-2024	Vice Director, Yokkaichi Hazu Medical Center
2024-Present	Director, Yokkaichi Hazu Medical Center

Penetrating and fibrotic Crohn's disease: How and when should intervention be decided?

Takayuki YAMAMOTO

Yokkaichi Hazu Medical Center, Japan

Crohn's disease (CD) is a chronic inflammatory condition of the gastrointestinal tract that can present with various complications, including penetrating and fibrotic phenotypes. These subtypes of CD require distinct management strategies due to their differing pathophysiological mechanisms and clinical manifestations. Penetrating Crohn's disease is characterized by the formation of fistulas and abscesses, leading to significant morbidity, while fibrotic Crohn's disease involves stricturing of the intestines due to excessive scar tissue, causing bowel obstruction and other complications.

The decision-making process for intervention in these cases is complex and must be individualized based on patient-specific factors, disease severity, and response to medical therapy. Early and accurate differentiation between penetrating and fibrotic disease is crucial for optimizing treatment outcomes. Diagnostic modalities such as magnetic resonance enterography, computed tomography enterography, and endoscopic evaluation play a pivotal role in this assessment.

Management of penetrating Crohn's disease often involves a combination of medical and surgical approaches. Anti-TNF agents, immunomodulators, and antibiotics are commonly used to control active inflammation and infection. Surgical intervention may be necessary for refractory cases or to address complications such as abscess drainage or fistula repair.

Fibrotic Crohn's disease, on the other hand, is less responsive to medical therapy and frequently requires surgical management to relieve obstructions. Balloon dilation and strictureplasty are minimally invasive options that may be considered, but resection of the affected bowel segment is often inevitable in severe cases.

Timely and appropriate intervention is key to improving quality of life and preventing disease progression in patients with penetrating and fibrotic Crohn's disease. This presentation discusses the criteria for deciding when and how to intervene in these challenging cases, emphasizing a multidisciplinary approach that integrates the expertise of gastroenterologists, radiologists, and surgeons.

Soo-Young NA
Incheon St. Mary's Hospital, Korea

Education

Bachelor's degree, College of Medicine, University of Ulsan
Master's degree, College of Medicine, University of Ulsan
PhD, School of Medicine, Jeju National University

Professional Experience

Resident and fellowship training
Internal Medicine, Asan Medical Center, College of Medicine, University of Ulsan
Associate professor
Internal Medicine, Jeju National University Hospital, College of Medicine,
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Steward of the IBD Research Group of the Korean Association for the Study of Intestinal Diseases (KASID)

Endoscopic interventions for structuring Crohn's disease

Soo-Young NA

Incheon St. Mary's Hospital, Korea

Crohn's disease (CD) affects approximately 70–80%, requiring surgery for obstructive symptoms within 20 years of diagnosis. Additionally, around 30% of those patients will need repeat surgeries within 10 years due to recurrence of symptoms. Repeated surgeries can lead to complications such as short bowel syndrome, fistulas, leaks, and abscesses. To minimize these risks, endoscopic balloon dilatation (EBD) has emerged as an alternative approach to delay surgery, showing promising outcomes with an 89% technical success rate and a 3% perforation rate.

Guidelines recommend EBD for strictures that are endoscopically accessible, less than 5 cm in length, non-angulated, and without contraindications like fistulas, abscesses, or malignancy. The technical success rate is about 90%, defined as the successful passage of the scope through the dilated stricture. Clinical success is determined by relieving obstructive symptoms, including nausea, bloating, abdominal pain, and vomiting. However, strictures over 5 cm are generally unsuitable for EBD, as each additional 1 cm in stricture length increases the risk of perforation-related surgery by 8%.

While balloon diameters ranged from 15 to 25 mm, increasing the balloon size did not improve clinical outcomes or reduce the need for repeat dilatation or surgery. EBD is considered a safe and effective procedure for small bowel CD strictures, helping to postpone surgery when performed under appropriate conditions.

This lecture will discuss endoscopic interventions for stricturing Crohn's disease.

Yong Sik YOON

Ulsan University, Asan Medical Center, Korea

Education

2000	MD, University of Ulsan College of Medicine
2006	MS, University of Ulsan College of Medicine
2011	PhD, University of Ulsan College of Medicine

Professional Experience

2010	Clinical Assistant Professor, University of Ulsan College of Medicine
2016	Associate Professor, University of Ulsan College of Medicine
2017	Research Fellow, Cleveland Clinic, OH, USA
2020	Director, Robotic Surgery Center, Asan Medical Center
2022	Professor, University of Ulsan College of Medicine

Strictureplasty for Crohn's Disease. Strategies to preserves bowel length and avert short bowel syndrome

Yong Sik YOON

Ulsan University, Asan Medical Center, Korea

Crohn's disease is a chronic inflammatory condition of the gastrointestinal tract that can lead to significant complications, including the need for surgical interventions. These surgeries can result in the removal of sections of the intestine, increasing the risk of developing short bowel syndrome (SBS), a condition characterized by insufficient intestinal length to maintain proper digestion and nutrient absorption.

1. Medical Management to Avoid Surgery:
   - o Pharmacological Therapy: The use of medications such as anti-inflammatory drugs, immunosuppressants, biologics, and small molecules can control inflammation and reduce the need for surgical intervention.
   - o Nutritional Support: Enteral nutrition (tube feeding) or parenteral nutrition (intravenous feeding) may be used to manage malnutrition and reduce inflammation, potentially avoiding surgery.
   - o Endoscopic Interventions: For strictures (narrowed areas) caused by Crohn's disease, endoscopic balloon dilation can be an alternative to surgery.
2. Surgical Techniques that Preserve Bowel Length:
   - o Strictureplasty: This procedure involves widening a narrowed section of the intestine without removing any bowel. It's particularly useful in patients with multiple strictures or those who have already undergone significant bowel resections.
   - o Limited Resections: When resection is necessary, surgeons aim to remove as little bowel as possible. The goal is to address the diseased segment while preserving maximum bowel length.
   - o Segmental Resection: In cases where multiple strictures are present, segmental resection may be performed instead of extensive removal, thereby preserving more of the bowel.
   - o Avoiding Repeated Surgeries: Surgeons and gastroenterologists work closely to minimize the need for repeated surgeries, which can progressively reduce bowel length and function.
3. Post-Surgical Management:
   - o Nutritional Rehabilitation: After surgery, careful nutritional management is essential to optimize bowel function and prevent complications associated with short bowel syndrome.
   - o Medications to Enhance Bowel Adaptation: Certain medications, such as growth factors or hormonal treatments, can promote bowel adaptation and increase nutrient absorption in patients with reduced bowel length.

4. Emerging Therapies:
    - o Stem Cell Therapy: Research is ongoing into the use of stem cells to repair and regenerate damaged intestinal tissue, potentially reducing the need for surgical intervention.
    - o Tissue Engineering: Advances in tissue engineering may someday allow for the creation of functional bowel segments, which could be used to replace diseased sections and preserve overall bowel length.
5. Patient Education and Monitoring:
    - o Education on Disease Management: Patients with Crohn's disease are educated on the importance of early intervention, medication adherence, and lifestyle modifications to manage their disease and avoid complications.
    - o Regular Monitoring: Regular follow-ups and monitoring are essential to detect disease progression early and adjust treatment plans accordingly, aiming to prevent the need for extensive bowel surgery.

Conclusion

The primary goal in managing Crohn's disease is to control inflammation and preserve as much bowel length as possible to prevent short bowel syndrome. A combination of medical, surgical, and emerging therapies, along with careful patient monitoring, can help achieve this goal and maintain a better quality of life for patients.

Min Soo CHO
Yonsei University, Korea

Education

2005	Graduated from Yonsei University College of Medicine (M.D.)
2010	General Surgery Residency, Severance Hospital, Yonsei Univ. (Board of Surgery)
2013	Graduate school of Yonsei University College of Medicine (M.S.)
2022	Graduate school of Yonsei University College of Medicine (Ph.D)

Professional Experience

2006-2010	Residency, Severance Hospital, Yonsei University College of Medicine
2013-2015	Fellowship, Severance Hospital, Yonsei University College of Medicine
2015-2022	Clinical assistant professor, Severance Hospital, Yonsei University College of Medicine
2022-Present	Assistant professor, Severance Hospital, Yonsei University College of Medicine

Does anastomotic technique affects the recurrence rate of Crohn's disease after ileocolic resection?

Min Soo CHO

Yonsei University, Korea

Surgical resection and anastomosis are recognized as effective treatments for complicated ileocecal Crohn's disease (CD), but a significant concern is postoperative recurrence, particularly in the preanastomotic area, which occurs in about 90% of cases. The two common anastomotic techniques are stapled side-to-side and hand-sewn end-to-end. Studies, including RCTs, have shown no significant difference in recurrence rates between these techniques. In 2003, Kono et al. introduced the Kono-S anastomosis, which initially showed promise in reducing recurrence rates. This technique is particularly beneficial in minimizing the risk of postoperative complications such as luminal stricture and recurrence. However, recent studies suggest that Kono-S may not significantly reduce endoscopic recurrence compared to conventional methods. Additionally, while some small studies suggest radical mesenteric resection might reduce postoperative recurrence, recent RCTs indicate no significant difference in endoscopic recurrence between extended and mesenteric-sparing resections. This presentation aims to review current evidence on the effectiveness of anastomotic techniques in reducing recurrence after ileocolic resection in CD.

Amosy E M'KOM

Meharry Medical College and Vanderbilt University Medical Center, USA

Education

Doctor of Medicine (MD)
Postgraduate and Surgical Residence (Certificate Diploma, General Surgery)
Licentiate of Medical Sciences (Surgery)
PhD (Doctor of Philosophy, Surgery)
Clinical Research Fellow (Colon and Rectal surgery)
Postdoctoral Clinical Research Fellow (Urologic Surgery)

Professional Experience

Recent work experience - Professor (Tenured)
- Principal Investigator: NIH-funded project in inflammatory bowel disease since 2010.
- Unit Director: Gastrointestinal Diseases/Disorders: MD & PhD Programs, Clinical Skills.
- Colorectal Physician Scientist (Basic, Clinical< Transformational & Translational)
- Academic Society College's Master: MD Program to Medical Students.
- Consultant Scientist Reviewer: NIH and DOD Study sections. § Educational background

CURRENT POSITION(S)
- Tenured Full Professor of Surgery, Surgical Sciences, Pathology and Cancer Biology Department of Biochemistry, Cancer Biology, Neuroscience and Pharmacology Schools of Medicine, Meharry Medical College Nashville, Tennessee, UNITED STATES, 2022-Date
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Pathophysiology and novel treatments for fibrosis or stricture

Amosy E M'KOM

Meharry Medical College and Vanderbilt University Medical Center, USA

Background and Aims

Predominantly colonic Crohn's disease, also called Crohn's colitis (CC) is debilitating incurable chronic relapsing and remitting colonic disorder caused by dysregulated immune function. In CC, the goal of therapy is to attain histologic and clinical remission through the complementary use of pharmacologic, nutritional, and surgical resection. The surgical resection is to remove downstream blockage or constriction and keep the upstream distended bowel to maintain the lumina continuity. Recurrences after surgical resection are 100% in a given time. Up to one third of patients with CC develop debilitating intestinal fibrosis caused by excessive fibrous collagen deposited transmurally leading to stricture formation and loss of normal gut function. Given the serious clinical implications of progressive fibrosis and muscularized mucosae thickening, this field is in critical need of further studies to characterize, diagnose and treat fibrosis in CC. The mechanisms for muscle dysfunctions are not completely understood. We tested the hypothesis that mechanical stress plays a role in muscle dysfunction in a rat model of Crohn's-like colitis where inflammatory stenosis leads to mechanical distention in the pre-inflammation site.

Methods

Crohn's-like colitis was induced by intracolonic instillation of TNBS (65 mg/kg) in Sprague-Dawley rats. Control rats were instilled with saline. The rats were fed with either regular solid food or exclusively liquid diet. Rats were euthanized by day 7.

Results

When rats were fed with solid food, TNBS treatment induced localized transmural inflammation with stenosis in the instillation site and marked distention with no inflammation in the pre-inflammation site of the colon. Smooth muscle contractility was suppressed, and expression of cyclo-oxygenase-2 (COX-2) and production of prostaglandin E2 (PGE2) were increased not only in the inflammation site but also in the pre-inflammation site. Liquid diet treatment, mimicking exclusive enteral nutrition, completely released mechanical distention, eliminated COX-2 expression and PGE2 production, and improved smooth muscle contractility especially in the pre-inflammation site. When rats were administered with COX-2 inhibitor NS-398 (5 mg/kg, i. p. daily), smooth muscle contractility was restored in the pre-inflammation site and significantly improved in the inflammation site.

Conclusion

(i) Colonic smooth muscle contractility is significantly impaired in stenotic Crohn's-like colitis rats not only in the inflammation

site, but in the distended pre-inflammation site. (ii) Mechanical stress-induced expression of COX-2 plays a critical role in smooth muscle dysfunction in the pre-inflammation site in Crohn's-like colitis rats. (iii) Liquid diet treatment relieves lumen distention and improves disease activity and luminal continuity in TNBS-treated rats. (iv) Pre-clinical evaluation studies are critically needed for liquid diet treatment and targeted COX-2 inhibitors to prevent structuring lesions which is key for therapeutic management to mitigate balloon dilatation and/or resection.

Sohyun KIM

Yeungnam University Hospital, Korea

Education

2006	College of medicine, Yeungnam University
2009	Master of medical science, Yeungnam Univ
2012	Doctor of Medical science, Yeungnam University

Professional Experience

2015-2020	Assistant professor, College of Medicine, Yeungnam University
2021-present	Associate professor, College of Medicine, Yeungnam University

Room 3

[KSCP-ASEAN]
Let's Share our Knowledge for Better Future

Chairs

Soon Sup CHUNG Ewha Womans University Mokdong Hospital

Francis SEOW-CHOEN Seow-Choen Colorectal Centre, Singapore

Carlo Angelo CAJUCOM

Jose. R. Reyes Memorial Medical Center, Philippines

Education

1996-2000	University of Santo Tomas Faculty of Medicine and Surgery

Professional Experience

2005	Quirino Memorial Medical Center (QMMC), Chief Resident, Department of Surgery, Accredited Residency Training Program for General Surgery
2006	Jose Reyes Memorial Medical Center, Section of Colon and Rectal Surgery (JRRMMC) Fellow-in -training-Colorectal Surgery Fellowship program Post-fellowship Colorectal Surgery
2008	Singapore General Hospital, Singapore
2009	HKEC Center, Pamela Youde Nethersole Eastern Hospital, Hong Kong-
2012	Royal Prince Alfred Hospital, Sydney, NSW, Australia
2013	Hue Central Hospital, Hue, Vietnam

Diplomate, Philippine Board of Surgery (PBS)
Diplomate, Philippine Board of Colon and Rectal Surgery (PBCRS)
Fellow, Philippine Society of Colon and Rectal Surgeons (PSCRS)
Fellow, Philippine Society of General Surgeons (PSGS)
Fellow, Philippine College of Surgeons (PCS)
Fellow, Philippine Association of Laparoscopic and Endoscopic Surgeons (PALES)
Master in Management Major in Hospital Management 2021

Intracorporeal vs. extracorporeal anastomosis after colon resection

Carlo Angelo CAJUCOM

Jose. R. Reyes Memorial Medical Center, Philippines

A crucial step in a safe colon resection after treating various diseases including benign and malignant conditions is the reconnection of the bowel ends – the anastomosis. Traditionally, this was performed outside the body (extracorporeal anastomosis). However, advancements in minimally invasive surgery whether laparoscopic or robotic surgery have led to the rise of intracorporeal anastomosis, where the connection is made within the abdominal cavity. This talk aims to provide an in-depth analysis of both techniques, comparing their advantages, disadvantages, implications for patient outcomes and situational perspectives.

There are unique advantages and disadvantages of both techniques reviewed in different studies, some of which are contrasting attributes of one from the other. Features associated in comparing the techniques will include visualization, control and complexity of the procedure, size of incision, operative time, complications, recovery and cost effectiveness. Literature search will also provide us with frameworks of considering other factors for selection based on tumor size and location, obesity, previous surgery, surgeon experience, expertise and training.

While both techniques have their own pros and cons, intracorporeal anastomosis is becoming increasingly popular due to its minimally invasive nature and faster recovery time. However, extracorporeal anastomosis remains a valuable option for complex cases or when performed by surgeons with limited experience in minimally invasive techniques and under limited resources.

Analyzing and application of the views presented has led us to develop our Hybrid Intracorporeal Pelvic Stapling (HIPS) which marries open stapling with laparoscopy. We find it to be a safe and feasible option without giving up the benefits of laparoscopy or minimally invasive surgery. Our technique can be translated to cost-effectivity , and is a reasonable procedure as a bridging technique to employ and positioned between pure Laparoscopic and Conventional Open Surgery.

Ultimately, the choice between intracorporeal and extracorporeal anastomosis should be individualized based on the patient's specific situation, the surgeon's expertise, complexity of the case. It is crucial for patients to discuss their options with their surgeon to determine the most appropriate approach for their individual needs.

Winson Jianhong TAN
Sengkang General Hospital, Singapore

Education

Assoc Prof Winson Tan graduated with MBBS(Hons), as the valedictorian of his cohort, from the Yong Loo Lin School of Medicine, National University of Singapore in 2009. He subsequently entered the Singhealth General Surgery Residency Programme in 2010 and eventually graduated in 2015 as the valedictorian of that year. He obtained his Fellowship of the Royal College of Surgeons (Edinburgh) in 2015 and was awarded the College of Surgeon, Singapore, Gold Medal for being the top candidate in the Surgical Exit Examination.

In 2018, he went to Royal Prince Alfred Hospital, Sydney and completed a Fellowship in Colorectal and Advanced Gastrointestinal Oncological Surgery. He furthered his training in colorectal cancer care by completing the Advanced Colorectal Surgical Oncology fellowship in Memorial Sloan Kettering Cancer Center (New York, USA) from 2018-2019.
His clinical interests include the various aspects of colorectal surgical oncology, proctology and acute care surgery.

Professional Experience

Assoc Prof Winson Tan is a Senior Consultant and Head of Service in the Department of Colorectal Surgery, Division of Surgery, Sengkang General Hospital.

He also holds educational appointments:
- Clin ical Associate Professor, DUKE-NUS, National University of Singapore
- Adjunct Assistant Professor, Yong Loo Lin School of Medicine, National University of Singapore
- Clinical Teacher, Lee Kong Chian School of Medicine

Siripong CHEEWATANAKORNKUL
MIS Prince of Songkla University, Thailand

Education

1992-1998	Bachelor degree of Medicine, Faculty of Medicine, Prince of Songkhla University, Hadyai, Songkhla, Thailand.
1998-2002	Fellowship training of General Surgery, Songklanagarind Hospital, Hadyai, Songkhla, Thailand.
2007-2008	Certificate in Advance laparoscopic colorectal surgery, St's Vincent Hospital, Catholic Medical University, Suwon, South Korea.(Under Professor Jun Gi Kim)
2010-2011	Certificate in International Epidemiology program at Prince of Songkla University.
2014-2015	Certificated in Research fellowship Minimally Invasive and Bariatric surgery University of California San Francisco(UCSF) USA

Professional Experience

2002 - Present	Instructor of General surgery and Minimal invasive surgery, Department of surgery, Faculty of Medicine, Prince of Songkhla University.
2003 - Present	Surgeon and lecturer, Emergency Medicine Unit, Faculty of Medicine, Prince of Songkla University, Thailand.
2013 - Present	Director and instructor in PSU soft cadaveric (human) workshop& for surgical resident at Prince of Songkla University.
2015 - Present	Chief of Minimally Invasive Surgery, Prince of Songkla University
2019 - Present	Chair of the Robotic Surgery Steering Committee, Prince of Songkla University
2023 - Present	Vice president of Thai Hernia society (scientific and education program)

Rentsenbalbar GANBAATAR
National Cancer Center of Mongolia, Mongolia

Education

1987-1994	Military Medical Academy Sankt-Peterburg of Russia-Medical doctor
1996-1997	National Medical university of Mongolia, General surgery residency
2000-2002	Health science university of Mongolia, master's degree
2020-2023	Ach medical science school, PhD

Training:

2004	Colorectal surgery training, Toranomon Hospital of Tokyo Japan
2005	Colorectal surgery training, Aichi Cancer Center of Nagoya Japan
2008-2009	Visceral surgery, Kanton hospital Aarou Switzerland
2010	Laparoscopic colorectal surgery, NTUH Taiwan
2013	Gastric and colorectal surgery, Toranomon hospital Japan

Professional Experience

1995-1996	Medical doctor, Military Base of Sergelen (Mongolia)
1997-2003	Surgeon, General Surgery Department, National Cancer Center, Ulaanbaatar, Mongolia
2003-2014	Senior surgeon on colorectal surgery, General Surgery Department, National Cancer Center, Ulaanbaatar, Mongolia
From 2014	The Head of General surgery department, National Cancer Center, Ulaanbaatar, Mongolia

Mina Ming-yin SHEN
China Medical University Hsinchu Hospital, Taiwan

Education

National Yang Ming University, School of Medicine
National Tsing Hua University, Department of Biomedical Engineering, MD-PhD
National Taiwan University, Executive MBA, master's student

Professional Experience

Vice Superintendent, China Medical University Hsinchu Hospital, Taiwan.
Assistant Professor, National Tsing Hua University, Taiwan
Board Certified Member of the Society of Colon and Rectal Surgeons, Taiwan
Proctor & Observation site of da Vinci Robotic Colorectal Surgery, Taiwan
Board Member of Endoscopic and Laparoscopic Surgeons of Asia Society (ELSA)
Board Member of the Asia-Pacific Endo-Lap Surgery Group (APELS)
Overseas Visiting Clinician, Colorectal Division in Surgery Department, Johns Hopkins Hospital, Baltimore, US
Overseas Visiting Clinician, Colorectal Division in Surgery Department and Endoscopy Department, National Cancer Center, Tokyo, Japan

Is D3 dissection (or CME c CVL) mandatory for Right-sided colon cancer?

Mina Ming-yin SHEN

China Medical University Hsinchu Hospital, Taiwan

Complete mesocolic excision improves lymphadenectomy for right hemicolectomy and respects the embryological planes. However, its effect on cancer-free and overall survival is questioned.

A Randomized Clinical Study compares short-term outcome of laparoscopic right hemicolectomy using the Complete Mesocolic Excision with patients who underwent conventional right-sided colonic resection.1 In this study laparoscopic CME were a safe and feasible technique. However, the long-term oncological outcome from randomized clinical study is still lacking.

Several Meta-analyses of observational and randomised studies showed that right hemicolectomy with complete mesocolic excision for primary right colon cancer improves oncologic results without increasing morbidity/mortality.2-4 But these results still need to be confirmed by randomised trials.

1. Ann Surg. 2021 Jul 1;274(1):57-62
2. Int J Colorectal Dis. 2021 May;36(5):881-892.
3. Tech Coloproctol. 2021 Oct;25(10):1099-1113.
4. Tech Coloproctol. 2023 Nov;27(11):979-993.

Room 4

[Wound & Ostomy Study Group]
Session 2.
Expert Opinions for Ostomy Care

Chairs

Ik Yong KIM Yonsei University, Korea

Kotaro MAEDA Shonan Keiiku Hospital, Japan

Shingo TSUJINAKA

Tohoku Medical and Pharmaceutical University, Japan

Education

1996	M.D. Jikei Medical University, Tokyo, Japan
2010	Ph.D. Jichi Medical University, Tochigi, Japan

Professional Experience

1996	Surgical resident, Jikei University Hospital, Tokyo, Japan
2002	Research fellow, Department of Colorectal Surgery, Cleveland Clinic Florida, USA
2004	Staff surgeon, Jikei University Hospital, Tokyo, Japan
2005	Senior surgical resident, Saitama Medical Center, Jichi Medical University, Saitama, Japan
2011	Assistant Professor of Surgery, Saitama Medical Center, Jichi Medical University, Saitama, Japan
2015	Senior lecturer of Surgery, Saitama Medical Center, Jichi Medical University, Saitama, Japan
2022	Associate Professor of Surgery, Tohoku Medical and Pharmaceutical University, Sendai, Japan

Current Status for Stoma Rehabilitation

Shingo TSUJINAKA

Tohoku Medical and Pharmaceutical University, Japan

Stoma rehabilitation is a multidisciplinary team approach aimed for improving the quality of life of individuals with stomas. With the increasing prevalence of illnesses including colorectal cancers, urogenital cancers, and inflammatory bowel diseases, the number of surgeries with stoma creation has risen, requiring comprehensive, continuous and sustainable rehabilitation programs. This presentation provides an overview of the current status for stoma rehabilitation, highlighting key components with recent advancements.

Preoperative education: Effective stoma rehabilitation begins with preoperative education, where patients receive information about the surgery, stoma care, and lifestyle adjustments. This preparation process helps reduce stress and anxiety and promotes an optimistic view in postoperative recovery. Intensive preoperative education improves ostomy adjustment and patient satisfaction, quality of life (Zganjar et al., Urol Oncol 2022).

Postoperative care: After surgery, patients receive training on stoma management including the use of pouching systems and skin care. Appropriate postoperative care is important for ensuring proper management and preventing stoma-related complications (Albulescu et al., Curr Health Sci J 2024).

Physical rehabilitation: The goal of physical rehabilitation is to regain patient's mobility, strength, and flexibility. Recently available recommendations provided health professionals to support and educated the patients about physical activity and exercise (Russell, Br J Nurs 2024).

Psychosocial support: Adjusting to life with stoma can be challenging. Psychosocial support, including counseling and support groups, plays a pivotal role in facilitating patients cope with emotional and psychological aspects, such as issues in body image and social interactions. A recent report showed that prehabilitation decreased predisposition to anxiety and depression and improves quality of life in patients with stomas (Koc et al., Dis Colon Recutm 2023).

Nutritional support: Dietitians provide tailored dietary guidance and monitoring to maintain appropriate nutrition. Dietary modifications are often helpful for effective stoma management avoiding stoma-related complications. Although instructions and guidance are widely available (Burch, Br J Community Nrs 2012), specific advice with high level evidence has been scarce (Abedin et al.. Colorectal Dis 2024)

Long-term follow-up: Periodic appointments and interviews with healthcare providers ensure ongoing support and timely intervention for any issues that may arise. Continuing care is beneficial in improving health outcomes and care satisfaction for patients with stomas compared with routine care (Jin et al., Asia Pac J Oncol Nurs 2021).

Currently, Asian countries are facing significant challenges due to the aging populations, with decreasing workforces and increasing demand for healthcare and social services. Higher prevalence of elderly population may require more stoma surgeries, such as colorectal cancer and diverticulitis. However, recent advancements in increased awareness and diagnosis, improved surgical techniques, effective pouching systems, enhanced patient education programs may contribute to improved outcomes and quality of life for patients with stomas.

Hye Youn KWON
Yonsei University, Won-ju, Korea

Education

2004	Bachelor's degree, Yonsei University Wonju College of Medicine
2013	Master's degree, Graduate School, Yonsei University College of Medicine
2024	Doctoral degree, Graduate School, Yonsei University College of Medicine

Professional Experience

2010-2012	Clinical and Research Fellow in Division of Coloproctology, Department of Surgery, Yonsei University Health System, Seoul, Korea
2013-2015	Department of Surgery, Sam-yook Seoul Hospital
2016-	Department of Surgery, Division of Coloproctology, Department of Surgery, Won-ju Severance Christian Hospital, Yonsei University Wonju College of Medicine

Stoma Complications: How to Manage and Prevent?

Hye Youn KWON

Yonsei University, Won-ju, Korea

The estimated number of ostomates in the United States is 750,000 to 1 million, with approximately 150,000 new ostomies created each year. Stoma creation has a relatively high rate of associated morbidity, ranging from 20% to 80%. Early complications are those occurring within the first 30 days and late complications are those occurring after the patient's physiological adjustment. Early complications are ischemia/necrosis, fluid and electrolyte imbalances, mucocutaneous separation, and retraction. Late complications are parastomal hernia, stoma prolapse, and pyoderma gangrenosum. Peristomal skin complications and parastomal hernia are the most common associated morbidities.

Risk factors for stoma-related complications include patient-related risk factors and treatment-related risk factors. Patient-related factors include comorbidities of the cardiac, respiratory, and musculoskeletal systems, obesity (BMI>30), diabetes, smoking, malignant tumors, old age (Age>60), and poor nutritional status. Risk factors associated with medical and surgical treatments are emergency surgery, surgery for malignant tumors, poor surgical technique, exclusion of preoperative training by an ostomy nurse, concurrent chemotherapy, or preoperative radiotherapy.

American Society of Colon and Rectal Surgeons updated Ostomy Surgery Clinical Practice Guidelines in 2022. Among them, important recommendations to reduce stoma complications include: 1. Patients undergoing elective stoma creation should receive preoperative and postoperative ostomy education by a specialized provider such as a wound ostomy and continence nurse, Grade 1B. 2. Appropriate potential ostomy sites should be marked preoperatively by a trained provider when possible, Grade 1B. 7. In nonobese patients, the routine use of a support rod at the time of loop ileostomy construction is not necessary, Grade 1A. 8. The routine use of prophylactic mesh to prevent parastomal hernia during ostomy creation is not recommended, Grade 2A. 9. Extraperitoneal tunneling of an end colostomy may decrease the risk of parastomal hernia. Grade 2B.

The formation of colostomy or ileostomy should not be considered as a minor procedure. Both colorectal surgeons and non-colorectal surgeons should be aware of significant colostomy complications. Following the standardized protocols and updated guidelines is important to reduce the frequency of stoma-related problems. In addition, pre-and postoperative ostomy education by a clinical wound ostomy nurse specialist is essential.

Kil-yong LEE
The Catholic University of Korea, Korea

Education

2003-2009 Doctor of medicine, Chosun University
2017-2019 Master's degree, Seoul National University
2019-2022 Ph D, Seoul National University

Professional Experience

2009-2010 Intern, Seoul National University Hospital
2010-2014 Resident, Seoul National University Hospital
2017-2018 Fellow, Seoul National University Hospital
2018-2020 Fellow, Uijeongbu St. Mary's Hospital
2020-2023 Clinical assistant professor, Uijeongbu St. Mary's Hospital
2023-Present Assistant professor, The Catholic university of Korea, Uijeongbu St. Mary's Hospital

Surgical Management for Ostomy Complications

Kil-yong LEE

The Catholic University of Korea, Korea

Ostomy surgery, while life-saving for many patients, can lead to various complications that significantly impact quality of life and require surgical intervention. This presentation provides a comprehensive overview of the surgical management strategies for ostomy-related complications, incorporating the latest evidence-based practices and innovative techniques.

We begin by discussing the most common ostomy complications, including parastomal hernias, stoma prolapse, stenosis, and retraction. The clinical presentation of each complication are briefly outlined to provide context for the surgical approaches.

The main focus of this review is on the surgical techniques employed to address these complications. We explore both traditional and emerging minimally invasive approaches, comparing their efficacy, safety profiles, and long-term outcomes. Particular attention is given to laparoscopic and robotic-assisted repair of parastomal hernias, which have shown promising results in recent studies.

Finally, we present a decision-making algorithm to guide surgeons in selecting the most appropriate surgical intervention based on complication types and severity. This algorithm integrates recent clinical guidelines and expert consensus to provide a practical tool for surgical planning.

This comprehensive review aims to equip surgeons with up-to-date knowledge and skills to effectively manage ostomy complications, ultimately improving patient outcomes and quality of life.

Mi Kyung CHO
Ewha Womans University Seoul Hospital, Korea

Education

2002	Keimyung University, College of Nursing, Bachelor
2010	Eastern University, Health Service Management, Master

Professional Experience

2011	Certified Critical Care Nurse (CCRN)
2013-2019	Ewha Womans University Mokdong Hospital, WOCN
2015	Oncology Certified Nurse (OCN)
2016	Certified Wound, Ostomy, Continence Nurse (CWOCN)
2017-	Instructor in public health project at Ministry of Health and Welfare
2019-	Current Ewha Womans University Seoul Hospital, WOCN
2023-	KAWOCN, Chair of Ostomy Education Committee

Consensus for Standardization of Ostomy Care Practice Guidelines for Nurses and Doctors

Mi Kyung CHO

Ewha Womans University Seoul Hospital, Korea

The creation of stoma can be a common event during colorectal surgery, both in elective and emergency situation. Also, there are various reasons for stoma formation such as cancer, trauma, crohn's disease, diverticulitis, and so on. Regardless of the reason for having ostomy surgery, the management of an ostomy can be germane to the quality of live for ostomy patients. The goal for the ostomy management will include to maintain the pouching system without leakage and other stoma and/or peristomal complications. Despite of the advanced materials for ostomy pouching system, many patients still experience ostomy-related complications which reduce their quality of lives. The preoperative consultation to the WOCN (Wound Ostomy Continence Nurse) and the stoma site marking by WOCN will be the way to decrease the complications with stoma and to increase the quality of live with ostomy patients. For the reasons, the stoma site marking and preoperative consultation are recommended by WOCN society and ASCRS (The American Society of Colon and Rectal Surgeons).

Raising concerns is intended to enable medical professionals and patients to find appropriate treatment in a particular situation. There is a need for more specific contents and the development of guidelines to support decision making, including pre and postoperative care for patients, prevention and management of complications, and education for patients and their families. Based on the reasons, this presentation reviews the several ostomy guidelines to support the evidence-based clinical practice.

Room 1

Angelita Habr-Gamma Pioneer in Colorectal Surgery Award

Chair

Ricardo ESCALANTE
Central University of Venezuela, Venezuela

Patricia SYLLA

Mount Sinai Hospital, Venezuela

Education

1992-1996	B.S., Georgetown University, Washington DC
1996-2000	M.D., Weill Cornell Medical College, New York, NY
2000-2006	Internship and Residency, General Surgery, Columbia University Medical Center, New York, NY (Primary mentor: Dr. Mark Hardy)
2006-2007	Fellowship, Colorectal Surgery, Mount Sinai Hospital, New York, NY (Primary mentor: Dr. Randolph Steinhagen)
2007-2008	Fellowship, Minimally Invasive Surgery, Massachusetts General Hospital, Boston, MA (Primary mentor: Dr. David Rattner)

Professional Experience

2008-2011	Instructor of Surgery, Harvard Medical School and Department of Surgery, Division of General and Gastrointestinal Surgery, Massachusetts General Hospital, Boston, MA
2011-2015	Assistant Professor of Surgery, Harvard Medical School and Department of Surgery, Division of General and Gastrointestinal Surgery, Massachusetts General Hospital, Boston, MA
2015-2017	Assistant Professor, Department of Surgery, Division of Colorectal Surgery, Mount Sinai Hospital, New York, NY
2015-2018	Visiting Scientist, Department of Surgery, Massachusetts General Hospital, Boston, MA
2015-	Associate Director, Colorectal Surgery Fellowship Program, Mount Sinai Hospital, New York, NY
2017-2021	Associate Professor of Surgery, Department of Surgery, Division of Colorectal Surgery, Mount Sinai Hospital, New York, NY

Room 1

[ABSTRACT]
Free Paper 7 (Basic Research)

Chairs

Sung Woo CHO CHA Gangnam Hospital, Korea

Ki-Beom BAE Inje University, Korea

The Effect of Wireless Smart Environment in Surgery: From the Perspective of Education

Khaliunaa BATTULGA[1], Byung-So MIN[2]

[1]National Cancer Center of Mongolia, Mongolia
[2]Yonsei University College of Medicine

Background

With the rapid development of wearable technology in recent years, the technology is gradually being applied to the operating room. In particular, the latest technology has a wireless function that is not hindered by wires, and it is possible to provide education at the same time as medical treatment, surgery and encouraging results have been reported in terms of educational effectiveness. Wearing smart glasses is expected to improve students' understanding of surgery by increasing their concentration on surgery. This study aimed to look at the effect of wireless smart glasses from the perspective of surgical education.

Methods

This study was conducted on 55 third-year students who were practicing colorectal surgery in the Department of Surgery at Yonsei University College of Medicine for about 2 years from 2021.06.23 to 2023.05.30.

Result

Primary endpoint: Movement during surgery observation- Of the 55 participants, 25 (45.5%) reported that they had moved their seats during surgery, and 2 (84%) of the participants said that they were not wearing smart glasses at the time of movement. The majority of the participants, 54 (98.1%), said that wearing smart glasses helped them understand the surgery.

Secondary endpoint: Effect on surgical understanding, fatigue, preference, and help in surgical education. The majority of participants, 50 people (90.9%), answered that they are 'very helpful' or 'helpful', indicating that smart glasses can be effective in surgical education. When asked whether they would be willing to use smart glasses to visit future surgeries, 41 people (76.4%) showed a high preference.

Discussion

In this study, smart glasses it is expected that there are many ways that can be helpful to surgeons in addition to the perspective of education, and further research on this is required.

Effect of Perioperative Synbiotic Administration on Surgery Outcomes among Patients Undergoing Colon Surgery

Lily MALAFO

Baguio General Hospital and Medical Center, Philippines

Background

Colorectal surgery patients have been shown to be at higher risk for mortality, poor outcomes and worse quality of life due to postoperative complications, most commonly infectious in nature. Numerous studies showed that probiotics have promising results in terms of reducing bacterial translocation, enhancing intestinal mucosal integrity and preserving a favorable balance of beneficial to pathogenic bacteria in the gut. However, some studies showed otherwise.

Objective

This study then mainly aims to determine the effect of perioperative synbiotic administration on surgery outcomes among patients undergoing colon surgery.

Methods

This was an open-label trial. Participants were randomly allocated to either synbiotic treatment or standard of care group. The treatment group received 1 capsule of synbiotic once a day for 7 days pre- and post-surgery. Incidence of fever, tachycardia, SSI, anastomotic leak and bowel ileus as well as length of hospital stay were determined and compared between the two groups. Adverse outcomes among the treatment group were also determined.

Results

The patient demographics were not significantly different ($p>0.05$). No significant differences were found between the two groups in terms of fever ($p = 0.435$), tachycardia ($p = 0.434$) and anastomotic leak ($p = 0.294$). However, the incidence of surgical site infection (22.73% vs. 2.27%; $p = 0.002$), and bowel ileus (19.09% vs. 4.55%; $p = 0.038$) were significantly lower in the synbiotic group. The mean length of hospital stay was shorter in the synbiotic group however this did not reach statistical significance (7.55 ± 1.41 vs. 4.77 ± 1.34; $p = 0.091$). Among the participants who received symbiotic, only 1 (4.55%) presented with diarrhea.

Conclusion

This study showed that perioperative administration of synbiotics can effectively reduce the rate of surgical site infections and bowel ileus among patients undergoing elective colon surgery. Synbiotics use was also generally well tolerated and is apparently safe.

Predictive model of surgical site infections empowered by AI: An innovative approach to reduce postoperative complications

Norikatsu MIYOSHI, Hikarsu SATO, Mitsunobu TAKEDA, Yuki SEKIDO, Tsuyoshi HATA, Atsushi HAMABE, Takayuki OGINO, Mamoru UEMURA, Yuichiro DOKI, Hidetoshi EGUCHI
Gastroenterological Surgery, Osaka University, Japan

Background (Aims)

Surgical Site Infections (SSIs) are a significant postoperative complication especially in lower bowel surgeries, extending patient recovery times and increasing healthcare costs. This study aims to utilize Artificial Intelligence (AI) to predict the risk of SSIs, with the goal of improving preventive measures and patient outcomes.

Methods

Data from surgical patients were collected through our multicenter trial, incorporating variables such as age, gender, type of surgery, pre-existing conditions, and duration of surgery. A machine learning model was developed and trained on these variables to predict the occurrence of SSIs. The performance of the model was evaluated based on metrics of accuracy, sensitivity, and specificity.

Results

The developed predictive model demonstrated a high level of accuracy, with a sensitivity of 74.7% and specificity of 99.5%. It was particularly effective in identifying patients at high risk for SSIs in lower bowel surgeries. The model also identified key risk factors associated with increased SSI risk, enabling targeted preventive measures.

Conclusions

Leveraging AI to predict SSIs offers a significant opportunity to improve post-surgical care and reduce infection rates. By pinpointing patients who are at higher risk, medical professionals can tailor preventative and post-operative measures specifically to reduce infection likelihood. The next steps in research should concentrate on enhancing these predictive models through the inclusion of live data (images), enabling a more dynamic evaluation of risk and the development of care plans that are customized for each patient.

Exploring Colorectal Cancer Metabolites in Blood Samples Using Gas Chromatography-Mass Spectrometry

Soohyeon LEE, Moo-Jun BAEK, Taesung AHN, DONGHYUN KANG, DONGHEE JO

Surgery, Soonchunhyang University Cheonan Hospital, Korea

Background

To overcome the limitations of existing cancer screening tools, cancer diagnostic technologies are emerging that utilize metabolites identified in the specific metabolic processes of malignant tumors, which are distinct from those of other diseases. Samples such as breath, urine, and stool, which are commonly used in most studies, have limitations due to their susceptibility to environmental conditions and dietary factors. Therefore, this study aims to identify metabolites in the blood of colorectal cancer (CRC) patients that differ from those in patients with benign diseases and to evaluate their potential as diagnostic tools.

Methods

The study was conducted using blood samples from 48 patients diagnosed with colorectal cancer who had not yet undergone surgical treatment, and 39 control patients with benign diseases. The preprocessed blood samples were analyzed using Gas Chromatography-Mass Spectrometry, with 1 μg/mL of Chlorobenzene-D5 used as the internal standard for comparison between samples. The analyzed data were quantified by integrating the peaks using quantitation software, and the concentrations were then calculated.

Results

Among the detected metabolites, a comparison between the CRC group and the control group revealed distinct differences in the distribution of metabolite peaks, as shown in Figure (A). Figure (B) shows these findings after applying the area normalization method using Chlorobenzene-D5. Statistically significant higher levels of p-/m-/o-Xylene were observed in CRC patients compared to the control group, while Toluene was found at lower levels in the CRC group.

Conclusion

Consistent with previous studies on volatile organic compounds in CRC patients, Xylene was also detected at high concentrations in the blood samples, suggesting the potential for using metabolites in CRC diagnosis. Based on these results, further research with a larger cohort of CRC patients is needed to explore metabolic changes in the xenobiotic metabolic pathways involving Xylene and Toluene.

Synergistic Anticancer Effects of FGFR Inhibitor and Cannabidiol in Colorectal Cancer

Yeonuk JU, Sun Il LEE, Jun Woo BONG, Chin Ock CHEONG, Sang Hee KANG, Byung Wook MIN

Division Of Colon And Rectal Surgery, Korea University Guro Hospital, Seoul, Korea

Introduction

Colorectal cancer (CRC) remains a significant global health challenge. Although multidisciplinary treatments combining surgery, chemotherapy, and targeted anticancer drugs have improved outcomes for stage 4 metastatic CRC, treatment options remain limited. FGFR (Fibroblast Growth Factor Receptor) has emerged as a crucial target in various cancers, including CRC, with ongoing development and clinical trials of FGFR inhibitors. Additionally, cannabidiol (CBD), a non-psychoactive cannabinoid, has demonstrated potential in inducing cell death and overcoming drug resistance in colon cancer. This study aims to analyze the effects of FGFR inhibitors on colon cancer, explore their potential as novel targets, and enhance anticancer effects through combination therapy with CBD.

Method

Normal and cancer cell lines were cultured in RPMI 1640 medium with 10% FBS. Cannabidiol and FGFR inhibitors were applied, and protein expression was analyzed via western blot. Cell viability was assessed using the WST-1 assay, while apoptosis was measured through flow cytometry using Annexin V-FITC/PI staining. CHOP-specific siRNA transfection was performed to study gene silencing effects, followed by RNA sequencing for differential expression and pathway analysis. Statistical significance was determined using ANOVA and t-tests, with $P < 0.05$.

Results

FGFR expression patterns were confirmed in various cancer cell lines, with NCI-H716 showing high FGFR2 expression. Treatment with CBD (4μM) and AZD4547 (10nM) resulted in significant cell death, especially when used in combination, indicating the effectiveness of this combined therapy. Increased apoptosis in NCI-H716 cells was confirmed with the combined treatment. RNA sequencing and heatmap analysis suggested that ER stress might be related to the observed synergistic effect. The role of ER stress in the combination-induced apoptosis of NCI-H716 cells was further validated.

Conclusion

The combination of FGFR inhibitors and cannabidiol was effective in inducing cell death in colorectal cancer cells, likely through the ER stress pathway. This study supports the potential of combined FGFR inhibitor and CBD therapy as a promising strategy for enhancing anticancer effects in CRC.

Gut microbiota and metabolite profiling as candidate biomarkers for predicting poor response to preoperative chemoradiotherapy in rectal cancer

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[1]Yeouido St. Mary's Hospital, College Of Medicine, The Catholic University Of Korea

[2]Department Of Surgery, Seoul National University College Of Medicine, Korea

[3]HEMPHARMA INC, HEMPHARMA INC, Korea

[4]Department Of Surgery, School Of Medicine, Keimyung University And Dongsan Medical Center, Korea

Background

Prediction of response after chemoradiotherapy can help clinicians to determine further management in rectal cancer. Gut microbiota has been suggested as a biomarker in various diseases. The purpose of this study was to investigate the correlations between the gut microbiota and metabolite profiling and the patient's response for chemoradiotherapy in rectal cancer.

Methods

As a multicenter translational study, fecal samples were collected at pre-treatment setting from 64 rectal cancer patients who underwent preoperative chemoradiotherapy. According to AJCC tumor regression grade (TRG) systems, patients were classified to the responder (TRG 0-2) and the non-responder (TRG 3). The differences of fecal microbiota and metabolite profiling between the two groups were investigated. Using fecal samples, we performed 16S rRNA gene sequencing and metabolites profiling by gas chromatography time-of-flight mass spectrometry (GC-TOF-MS) analysis. Microbiome analysis was proceeded with QIIME2 pipeline and bioinformatic tools such as DESeq2 and LEfSe for differential abundance analysis. For metabolite profiling, we used multivariate statistical analysis to analyze significantly different metabolites between the two groups.

Results

There were 51 samples in the responder group and 13 samples in the non-responder group. In microbiome analysis, the alpha diversity and beta-diversity were not different between the two groups. Through the differential abundance analysis, two gut bacteria, Peptostreptococcus and Parvimonas, were significantly enriched in the non-responder group compared to the responder group. The area under the ROC curve of combined these two microbiotas was 0.77 for the prediction of TRG 3 rectal cancer. In metabolite profiling, 12 metabolites showed differences and especially 2 metabolites, MG(18:0/0:0/0:0) and glycolic acid were the most significantly different between the two group. The area under the ROC curve of these metabolites was 0.8. After combining the microbiota and metabolites the area under the ROC curve was 0.99.

Conclusions

In conclusion, there were some differences in the gut microbiota and metabolite between TRG 0-2 group and TRG 3 group. These results suggest that the gut microbiota and metabolite can be candidate biomarkers for the prediction of poor response to chemoradiotherapy in rectal cancer. Alternative treatments such as Total Neoadjuvant Therapy (TNT) can be considered for patients who do not respond well to preoperative chemoradiotherapy.

Room 2

[ABSTRACT]
Free Paper 8 (Pelvic floor)

Chairs

Gyu Young JEONG Hansol Hospital, Korea

Jai Hyun RHYOU Seoul Songdo Hospital, Korea

What Do We Know About Pelvic Floor Anatomy And Diseases?

Serkan ZENGER[1], Dursun BUGRA[1], Serkan ZENGER[1], Nazan CANBULAT[2], Yaprak ATAKER[2], Tufan TARCAN[3], Ebru ALPER[4], Esra Kececi CIVCI[5], Emre BALIK[6], Mehmet TUNC YALTI[1], Dursun BUGRA[1]

[1]Department Of General Surgery, Vkf American Hospital, Turkey
[2]Department Of Physical Medicine And Rehabilitation, Vkf American Hospital, Turkey
[3]DEPARTMENT OF UROLOGY, VKF AMERICAN HOSPITAL, Turkey
[4]DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, VKF AMERICAN HOSPITAL, Turkey
[5]DEPARTMENT OF NURSING, VKF AMERICAN HOSPITAL, Turkey
[6]DEPARTMENT OF GENERAL SURGERY, KOÇ UNIVERSITY, SCHOOL OF MEDICINE, Turkey

Aim

Our aim was to evaluate the level of knowledge and awareness about pelvic floor anatomy and diseases with the questionnaire that we prepared.

Method

A 'knowledge and awareness questionnaire' including pelvic floor anatomy, functions, diseases, diagnosis, and treatment methods was prepared by the American Hospital Pelvic Floor Diseases Center. Participants from all occupational groups working at the American Hospital were included in the study. The level of knowledge and awareness on the subject was evaluated with a written or online questionnaire.

Results

A total of 946 people, including 526 (55.6%) health workers and 420 (44.4%) non-health workers from different occupational groups, participated in the study. The mean age of the participants was 34±12, and 552 (58.3%) of them were female. While 167 (17.6%) participants had no idea about the location of the pelvic floor in the body and the structures it contains; 742 (78.4%) participants knew that it is located in the inner part of the pelvis and consists of muscles. When pelvic floor diseases were questioned; the most known diseases were urinary (70.3%) and fecal (63.8%) incontinence, while the least known diseases were sexual dysfunction (48.8%) and difficulty defecating (52.8%). It was found that the most known diagnostic methods were pelvic USG or endoanal USG (63.5%) and the least known ones were the balloon expulsion test (17.4%) and electromyography (17.4%). When the treatment methods were questioned; pelvic floor exercise (64.3%) was the most known, while biofeedback (23.8%) and percutaneous tibial nerve stimulation (22.8%) were the least known.

Conclusion

In line with the answers given by the participants from different occupational groups, it was seen that the knowledge and awareness about pelvic floor anatomy and diseases were at a complex level. We think that awareness should be increased by providing education and information at the social level.

Insights into Results of Global Audit for Fecal Incontinence on Behalf of the European Society of Coloproctology (ESCP) Collaborating Group

Audrius DULSKAS[1], Dovile CERKAUSKAITE[1], Alla EL-HUSSUNA[2], Gaetano GALLO[3], Thomas PINKEY[4], Dion MORTON[4], Dragomir DARDANOV[5], Saulius SVAGZDYS[6], Charlie KNOWLES[7]

[1]Department Of Abdominal And General Surgery And Oncology, National Cancer Institute, Lithuania
[2]Department Of Surgery, Aalborg University Hospital, Denmark
[3]Department Of General Surgery, Sapienza University Of Rome, Italy
[4]Institute Of Applied Health Research, Institute Of Applied Health Research, United Kingdom
[5]Department Of Abdominal Surgery, Umbal, Bulgaria
[6]Department Of General Surgery, Lithuanina University Of Health Sciences, Lithuania
[7]Digestive Disease And Surgery, Cleveland Clinic London, United Kingdom

Background

The aim of this study was to evaluate the incidence of fecal incontinence (FI) in patients attending colorectal clinics in a global setting, treatment choices and accessibility to diagnostic and treatment tools.

Methods

An international, multi-center snapshot audit was performed in an 8-week period between January 9, 2023 and March 28, 2023. All eligible cross-sectional data was recorded. Data was entered and saved in a REDCap secured database. Two physician- and center-level surveys were filled for current practice evaluation.

Results

1,813 outpatients with FI from 110 hospitals, from 35 countries were included in this audit. Majority of patients with FI were females, parous, and in age range 50-70. Patients most commonly waited 1 to 3 years until seen in outpatient clinic. Etiology skewed toward anal injury and rectal prolapse. Stress incontinence was diagnosed more common than urge incontinence (36% vs 23% respectively). Majority of patients received previous treatment (n=222 (61%)), which mostly included pelvic floor physiotherapy (n=149), bowel retraining with biofeedback (n=114), and nurse-led continence support (n=90). Sacral nerve stimulation was the most commonly performed procedure (n=114/395) for FI in outpatient clinics, followed by sphincterocplastty (n=87/395). Endoanal ultrasound (n=206/1,226) as well as anorectal manometry (n=185/1,1226) are the basic diagnostic tools used to diagnose FI in outpatient settings. More than a half (56%) of clincs have access to pelvic floor MDT. The majority of physicians offer surgical treatment (colostomy or sphincter repair) for FI.

Conclusions

Patients FI wait 1-3 years until attending colorectal clinics. Anal injury and rectal prolapse are the main causes of FI. FI treatment consists of conservative and surgical treatment, and there has not been a single best treatment option.

Physiologic change of Rectocele repair with PSH operation

Hyunun CHO

Department of Colorectal Surgery Dongguk University College of Medicine, Korea

Background/Aims: In 2005, Regadas et al. developed another technique— transanal repair of rectocele and rectal mucosectomy with a single circular stapler (TRREMS)—and reported its use in 8 patients with obstructed defecation caused by rectocele. And in a prospective multicenter study of 75 patients with retocele associated with mucosal prolapse or rectal intussususception, the mean Agachan-Wexner constipation score decreased significantly (from 16 to 4; p = 0.001), and the authors concluded that the TRREMS procedure is a safe and effective technique, capable of restoring the anatomic integrity of the anal canal. Another study21 in patients with grade II or III rectocele also demonstrated significant reductions in the mean constipation score (from 15.23 to 4.46; p = 0.001) and in the mean obstructed defecation score12 (from 10.6 to 2.9; p = 0.001) with the TRREMS procedure. Compared with STARR, the TRREMS procedure has the advantage of lower costs because it requires only 1 circular stapler. We have further modified the TRREMS procedure. TRREMS procedure had a chance of Rectovaginal fistula formation because of staple procedure of anterior Recovaginal septum. So We developed PSH procedure (Partial Stapled Hemorrhoidectomy and rectal mucosectomy of posterior and lateral compartement of rectum and preserving anterior compartment of rectum) and rectocele repair operation with modified Sullivan – Block method simultaneously . The aim of the current study was to demonstrate the use of this modified stapling technique, which we call the Rectocele repair (modified Sullivan-Block method) with PSH operation, to treat patients with obstructed defecation caused by rectal intussusception and rectocele and rectal mucosal prolapse patients.

The Three-Zone Perspective: Relationship between External and Internal Openings in Anal Fistulas

Natthida INCHAROEN, Kasidin Vitoopinyoparb, Siripong Sirikulpibul, Saraporn Kiattiubolwong

Rajavithi Hospital, Thailand

Cryptoglandular anal fistulas are challenging due to their complex anatomy and variable presentation. Surgical treatment requires accurate fistula characterization to choose the proper operative approach. Although Goodsall's rule is commonly used worldwide to predict fistula openings, some clinicians disagree with its applicability.

Objective

This descriptive study aimed to investigate the relationship between external and internal openings of anal fistulas at Rajavithi Hospital.

Method

A prospective analysis of single-center data collection was conducted from December 2021 to December 2023, including all patients with anal fistulas who underwent surgical treatment. Patient characteristics were collected retrospectively. Clinical assessment was performed intraoperatively by measuring perineal anatomy in relation to fistula characteristics. Fistulas were classified according to the Three-Area system: Posterior, Anterior, and Urogenital fistulas.

Results

A total of 144 patients were identified with 209 external openings and 126 internal openings. The findings revealed a notable distribution pattern: 100% of posterior fistulas displayed an internal opening located posterior to the transverse anal line, mostly presenting with a straight tract. Anterior and urogenital fistulas predominantly had internal openings located anterior to the transverse anal line (55.40% and 86.36%, respectively) even if the tract length is more than 3 cm. Comparing these results with Goodsall's rule, it became evident that the Three-Area system provided a more nuanced understanding of internal openings within different types of anal fistulas, especially anterior fistulas. The Three-Area system's ability to distinguish between anterior fistulas extending to the urogenital area versus those confined to the anterior region facilitated more precise localization of internal openings.

In conclusion

this study highlights that the Three-Area system is a reliable framework for characterizing anal fistulas compared to Goodsall's rule, especially in anterior fistulas.

Keywords

Anal fistula; Fistula-in-ano; Goodsall; Goodsall's Rule

Adaptation and Validation of the Turkish Version of the Wexner Incontinence Score in Patients with Low Anterior Resection Syndrome After Rectal Cancer Surgery

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Deparment Of General Surgery, Koc University School Of Medicine, Turkey

Background

The Wexner scale (WS) is a widely used questionnaire for fecal incontinence assessment. Since being introduced to the literature in 1993, it has been translated into numerous languages. However, WS was validated with female urogynecological patient populations in the majority of the studies. This study aims to adapt and validate WS in colorectal cancer patients and both genders in Turkish population.

Methods

The WS was translated into Turkish with the application of necessary cultural adaptations, and clarity and accuracy were provided by an expert colorectal surgeon team. Eligible patients who underwent colorectal surgery for cancer and patients managed with "Watch and wait" (WW) protocol between 2022 January and 2023 December from two tertiary Turkish hospitals completed LARS and Wexner questionnaires. Results are compared for validation of Wexner questionnaire. The patient population was divided into two groups as patients who underwent surgery and patients followed with WW. Half of operated patients completed the test twice for the test-retest assessment. For analysis, internal consistency was measured with Cronbach alpha coefficient. The test-retest reliability was measured with Intraclass Correlation Coefficient. Pearson's correlation test was administered to display correlation between Wexner and LARS scores. Statistical analyses were performed with SPSS.

Results

128 patients were included in this study, 70 in operated group and 58 in non-operated group. The Cronbach's alpha value is 0.954 in operated group, and 0.809 in non-operated. The spearman's correlation test yielded 0.922 for operated group, and 0.716 for non-operated. Intraclass Correlation Coefficient for test-retest reliability was calculated as 0.788 for WS.

Conclusions

The Turkish version of the WS was validated for assessing quality of life in colorectal cancer patients. This validation confirms reliability and cultural appropriateness for use in Turkiye. This study will contribute to assessment of defecatory functions in colorectal cancer patients, which will improve the patient care.

Room 3

[ABSTRACT]
Free Paper 9 (Neoplasm)

Chairs

Hyung-Joong JUNG Daehang Hospital, Korea

Se-Jin BAEK Korea University Hospital, Korea

Double tattoo technique to enhance inferior mesentery artery root lymph nodes dissection in laparoscopic anterior resection / low anterior resection.

Ren-Hao CHAN

National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Taiwan

Background (Aims)

Pre-operative endoscopic tattooing of colorectal lesions has been performed for years. Apart from aiding in tumor location identification, this technique also facilitates the identification of inferior mesenteric artery root lymph (IMA) nodes. Recently, IMA root lymph node dissection with preservation of the left colic artery has become popular due to its lower leakage rate. The use of tattoo material for mapping IMA root lymph nodes has made the procedure more accessible. The two main types of tattoo materials are India ink and indocyanine green (ICG). In this study, we utilized a combination of both tattoo materials to enhance lymph node mapping and harvesting.

Methods

One day before the laparoscopic operation, we employed endoscopic submucosal injection with both ICG and ink. We collected perioperative data, recorded any complications, and gathered pathological results for analysis.

Results

From September 2022 to December 2023, a total of 27 patients were enrolled in the study, comprising 11 females and 16 males. The median age was 61 years old. Among them, 19 patients (70%) exhibited double enhancement in lymph nodes, while only one patient (4%) showed negative results for both. The median number of harvested IMA root lymph nodes was 5 (with an interquartile range of 3 to 7). The median duration of lymph node dissection was 25 minutes (with an interquartile range of 20 to 27). No complications were observed related to the endoscopic tattooing procedure. However, there were 2 complications post-operation: one intra-abdominal infection and one case of chyloascites. Both complications were managed conservatively.

Conclusions

Utilizing the double tattoo technique could improve the identification of IMA root lymph nodes and streamline the lymph node dissection procedure. The procedure was conducted safely without any immediate complications.

Endoscopic Image based machine learning model for predicting pathological response in rectal cancer after neoadjuvant therapy

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[1]Seoul National University Hospital, Korea
[2]Department Of Biomedical Engineering, Seoul National University, Korea
[3]Biomedical Modeling & Control Lab, Seoul National University, Korea
[4]Department Of Surgery, Seoul National College Of Medicine, Korea

Background

The evolution of rectal cancer treatment, emphasizing organ-sparing approaches such as neoadjuvant chemoradiotherapy and Total Neoadjuvant Therapy(TNT), has led to the exploration of non-operative management strategies like the Watch & Wait approach. Despite progress, there is a lack of predictive tools to determine which patients require surgery after chemoradiotherapy. This study addresses this gap by developing a machine learning model to identify rectal cancer patients needing surgical intervention based on endoscopic imaging post-chemoradiotherapy.

Materials and Method

A cohort of 149 rectal cancer patients who underwent chemoradiotherapy and subsequent surgery was retrospectively analyzed. Each patient contributed an average of three endoscopic lesion images, totaling 777 images after visual screening. These were divided into groups—training, validation, and testing—in a 3:1:1 ratio. To balance the data, images of normal mucosa were included in equal number to lesion images. Post-operative pathology reports provided TRG classification, which was dichotomized into complete response (TRG 0) and incomplete response (TRG 1-3) according to the AJCC 8th edition standards. The chosen model was EfficientNet B6, trained over 300 epochs with a batch size of 8. An SGD optimizer with a learning rate of 0.01 and momentum of 0.9 was utilized.

Results

The model's performance, when assessing TRG status, was robust for TRG 1-3 detections, with a positive predictive value (PPV) of 97%, a specificity of 98% and a recall rate of 97%. The overall accuracy of the model was 87%, and the aggregate specificity was 89%. These metrics suggest the model is adept at identifying patients less likely to fully respond to chemoradiotherapy, albeit with a noted deficiency in detecting complete responders.

Conclusion

The study demonstrates the potential of a machine learning model to distinguish between rectal cancer patients who respond completely to chemoradiotherapy (TRG 0) and those with partial response (TRG 1-3)

Interactive Online Informational and Peer Support Application for Patients with Low Anterior Resection Syndrome (LARS): A Multi-center Randomized Controlled Trial

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Introduction

LARS is an important sequela of restorative proctectomy(RP) associated with poor quality of life(QoL) and emotional distress. The aim of this study was to assess the impact of an interactive online informational and peer support application on patients' QoL.

Methods

A multicentre, randomized, parallel-groups trial was conducted across five Canadian colorectal surgery practices. Adult patients who: (1)underwent RP for rectal cancer and completed all treatment and (2)have major/minor LARS were included. Patients were randomized in 1:1 ratio to treatment or comparison group, stratified by hospital site and years post-RP. The treatment group had access to the App for a period of 6 months, and the comparison group received by mail a booklet containing the same educational material as the App. The primary outcome was change in global QoL(EORTC-QLQ-C30) from baseline to 6months following access to the App or booklet. Per protocol and intention to treat analysis were performed, controlling for a priori selected variables (sex, time from end of treatment).

Results

Of 101 eligible participants, 10 individuals were lost to follow-up; 91 participants completed the study. Participants were well balanced in terms of baseline characteristics, QoL and bowel dysfunction. Of 45 App users, median log-in per person was 21, and 30(66.7%) participants met criteria for adequate app usage. On intention to treat analysis, there was a trend towards improved QoL in the App group. On the per protocol analysis, where only participants who met adequate App usage criteria were included in the treatment group, the App group experienced statistically significant improvement in QoL and LARS scores following App usage (β 9.5, 95%CI 4.6,14.6), with >10-point difference in average QoL score.

Conclusion

This multicenter randomized controlled trial demonstrated the benefit of an interactive online informational and peer support App on QoL of rectal cancer survivors living with LARS post-RP.

Longitudinal Assessment of Quality of Life after Laparoscopic Colorectal Cancer Surgery using the Gastrointestinal Quality of Life Index (GIQLI) Questionnaire: A Multicenter, Prospective Study with One-Year Follow-Up Results

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Background

The Gastrointestinal Quality of Life Index (GIQLI) is a tool for evaluating the quality of life (QOL) related to gastrointestinal conditions.

Aim

This multicenter prospective study aimed to assess the reliability of the Korean version of the GIQLI and evaluate postoperative outcomes following laparoscopic colorectal cancer surgery.

Methods

Between November 2021 and February 2023, 120 patients undergoing laparoscopic colorectal cancer surgery across four tertiary centers were enrolled. Participants completed the GIQLI and EORTC-QLQ-CR29 questionnaires twice preoperatively and at one week, three weeks, six months, and one year post-surgery. The study evaluated GIQLI reliability, identified risk factors associated with early postoperative QOL impairment, and assessed longitudinal changes in QOL to determine the recovery time point after surgery.

Results

Of 115 analyzed patients, the GIQLI showed high reliability, with a preoperative intraclass correlation coefficient of 0.930 (95% CI: 0.899-0.951) and Cronbach's alpha values >0.9 at all six points. Early T-stage (T1-2; OR 2.82, 95% CI: 1.25-6.40, P = 0.013) and intraabdominal drain use (OR 3.95, 95% CI: 1.09-14.28, P = 0.036) were significant risk factors for substantial QOL impairment. The predicted recovery period to 95% of preoperative QOL was 6.4 weeks. The mean global GIQLI score decreased from 106.2 ± 14.7 preoperatively to 92.7 ± 15.2 at one week postoperatively (P < 0.001), recovered to 104.6 ± 13.8 at six months (vs preoperative, P > 0.99), and increased to 113.4 ± 13.3 at one year (vs preoperative, P < 0.001).

Conclusion

The Korean version of the GIQLI is a reliable tool for assessing longitudinal changes in QOL after laparoscopic colorectal cancer surgery. Postoperative QOL recovered to preoperative levels at 6.4 weeks and showed further improvement at one year.

Perineal Reconstruction Using Vertical Rectus Abdominis Myocutaneous Flap After Extralevator Abdominoperineal Excision-A Case Series

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Surgery for low rectal cancer is a delicate balance between obtaining complete resection of the cancer and the quality of life of the patient afterwards. Oftentimes, locally advanced low rectal cancer would require a more radical surgery than the traditional abdominoperineal resection. Extralevator abdominoperineal excision (ELAPE) is meant to have a much wider excision of pelvic floor while avoiding "waisting" of the specimen. The downside, however, would be a larger pelvic floor defect, which usually warrants tissue transfer for closure. Four cases of low rectal tumors were included in this series. Three had bulky anorectal masses, one had malignant fistula-in-ano. All underwent long-course chemoradiotherapy prior to extralevator abdominoperineal excision with vertical rectus abdominis myocutaneous (VRAM) flap to address the perineal defect. Postoperative course for all patients were unremarkable. Follow-up showed good perineal integrity and no morbidities. Locally advanced low rectal cancers usually require more radical surgical approach to address a complete resection. This leaves a larger pelvic floor defect, which may be difficult to close by primary closure. As such, several reconstructive options are available such as gracilis flap, vertical rectus abdominis myocutaneous flap, thigh flap, and fasciocutaneous flap. The decision on which flap to use depends on a variety of factors such as the size of the perineal defect, the need for a neovagina, need for adjuvant radiotherapy, among others. VRAM flaps provide the greatest tissue mass to the pelvis, but may result to abdominal wall hernia. Other flaps have their own advantages and disadvantages. Locally advanced low rectal cancers are usually surgically treated with a more radical surgery which leaves a larger perineal defect. Closure of perineal defects require careful planning of which technique to use with its set of advantages and disadvantages. The VRAM flap provides great tissue mass to the pelvis, with minimal postoperative complications.

The Best Approach for Colorectal Cancer with Resectable Liver Metastasis: A Comparison of Surgery-First and Chemotherapy-First Strategies with Impact of Targeted Therapy

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Purpose

Neoadjuvant chemotherapy is extensively utilized for stage IV colorectal cancer. However, the efficacy of neoadjuvant chemotherapy for patients with resectable colorectal cancer liver metastasis (CRLM) remains uncertain. Consequently, this study aimed to compare oncologic outcomes between an operation-first approach and a chemotherapy-first approach in patients with initially resectable synchronous CRLM.

Methods

This retrospective study analyzed 336 patients diagnosed with resectable synchronous CRLM who received complete perioperative chemotherapy and underwent radical resection of the primary tumor and liver metastases between January 2007 and February 2022. Patients were stratified into two treatment groups, 'operation-first' and 'chemotherapy-first', based on the initial treatment modality they received. Primary endpoints were disease-free survival (DFS) and overall survival (OS). A secondary objective was to evaluate the impact of targeted therapy on these survival outcomes.

Results

This study comprised 244 patients in the operation-first group and 92 in the chemotherapy-first group. The operation-first group showed significantly better DFS and OS than the chemotherapy-first group. Additionally, the group utilizing targeted therapy had poorer DFS and progression-free survival than the group not using targeted therapy. Treatment type was a significant prognostic factor for DFS.

Conclusions

Personalized treatment strategies are needed for managing CRLM. This highlights the importance of upfront surgery followed by chemotherapy for patients with initially resectable synchronous CRLM to optimize therapeutic effectiveness. Furthermore, the use of targeted therapy may not improve outcomes for these patients.

Room 4

[ABSTRACT]
Session 3.
Oral Presentation for WOCN

Chairs

Kwang Ho KIM Ewha Womans University Seoul Hospital, Korea
Gi bong CHAE Kangwon National University Hospital, Korea

Visualization of Colonic Peristalsis Related to Bowel Movements after Temporary Stoma Closure — Measurement of One Case—

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Objective

The purpose of this study was to visualize colorectal peristalsis related to bowel movements after stoma closure.

Subjects and Methods

The subject had a temporary stoma which was subsequently closed.

The subject wore an electroenterometer for 24 hours (electrodes were installed in three places on the lower abdomen). In order to match the data with the electroenterometer, the subject was asked to fill out event sheets such as excretion, eating, and sleeping.

Results

The subject was a male in his 40s. About 6 years ago, a temporary stoma was placed in the sigmoid colon with rectal carcinoids, and the stoma was closed three months later after the surgery. During the measurement, the number of bowel movements was 5 times. Measurements using an intestinal electrograph showed HF (Hi Frequency) Area with the same regularity as healthy subjects before bowel movements.

Discussion

The subject reported that he had nearly 10 bowel movements per day. The subject sometimes had the urge to defecate and sometimes defecated even if they did not have the urge to defecate. In this intestinal potential measurement, it was confirmed that a bowel movement with regular HF was when there was a bowel movement. In other words, the number of bowel movements increases after stoma closure, but when there is no urge to defecate, HF is not regular, which is clear from the measurement of intestinal potential.

Experiences of Nurses Providing Care to Individuals with Ostomies Due to Earthquakes

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Background

Earthquakes are one of the disasters that negatively affect life in many ways. Over fifty thousand people death and over hundred people were injured in two earthquakes of magnitude 7.7 and 7.6 in southeastern Turkey on February 6, 2023, centered in Kahramanmaraş. Earthquakes can cause serious injuries. As a result of these injuries, individuals may experience unexpected situations such as intestinal ostomy. Nurses may have difficulty in caring for individuals who have intestinal ostomies due to earthquakes.

Aim

To determine the experiences of nurses who care for individuals with ostomies due to earthquakes.

Methods

The qualitative research method was used in the study. Qualitative data were collected through focus group interviews in April 2024. The informants of the qualitative research were 10 nurses who provided care to individuals with ostomy due to the earthquake. Inductive content analysis was performed.

Results

Five themes, 18 subthemes, and 4 categories were determined for the experiences of nurses who care for individuals with ostomies due to earthquakes. Five major issues were emphasized in the themes: Emotions experienced while providing care, difficulties experienced in caring for individuals with ostomies, difficulties of individuals with ostomies, factors facilitating the care of individuals with ostomies, and post-disaster trauma and psychological support/aspects that need to be developed.

Conclusion

The important and charming results of the present study were that nurses who provided care to individuals with ostomies experienced intense feelings of helplessness, inadequacy, and anxiety, and that they thought that although patients did not have difficulty in the physical care process, they could not manage their psychological trauma and losses. It is recommended that psychological first aid and supportive training be planned for nurses during the disaster preparation process.

A Narrative Research on the Experience of Patients Who Had an Intestinal Ostomy Opened Due to Earthquakes Centered in Kahramanmaras

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Objective

This qualitative study explores the experiences of individuals with intestinal ostomy due to the earthquakes centred in Kahramanmaraş.

Design

The study used a narrative research method for qualitative analysis.

Methods

Qualitative data was collected through individual interviews on March 1st, 2024. The informants were adult individuals, including an 18-year-old female who had an ostomy and lower extremity amputation due to an earthquake. Thematic analysis was conducted using the MAXQDA program.

Results

Data analysis resulted in the identification of 115 primary codes. The categories emphasized the following themes: feelings after ostomy, the effects of ostomy on daily life, experiences with ostomy care, challenges after ostomy, factors that facilitate coping with post-ostomy difficulties, and recommendations to enable ostomy management.

Conclusion

The aftermath of an earthquake can result in profound physical and emotional challenges impacting an individual's ability to manage ostomy. It is imperative to offer a supportive environment where individuals can share experiences and learn to embrace bodily changes, fostering a successful adaptation to their new life.

The results of a survey on the satisfaction of for home care for Cancer Patients With Ostomy by the Health Insurance Review and Assessment Service

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Backgrounds

The pilot project for home care for Cancer Patients With Ostomy by the Health Insurance Review and Assessment Service was developed by requiring home medical services for cancer patients so that patients discharged from the hospital after cancer treatment can receive patient-centered Health Insurance Review and Assessment Service at home. In addition, the number of health insurance premiums for educational counseling and management fees was developed to promote the teacher project so that the management efficiency could be increased by checking the condition of cancer patients and providing feedback.

This survey was conducted to explore the direction of improvement for A pilot project for home care for Cancer Patients With Ostomy to expand this project.

Methods

Medical services such as self-management education, counseling, and non-face-to-face management will be provided to cancer patients who need home care continuously after ostomy surgery.

The pilot project period is three years, of which the status, satisfaction, and demand of the pilot project for home medical care for cancer patients with ostomy were investigated for nurses belonging to the KAWOCN from Nov. 13, 2022 to Jan. 19, 2023.

Results and Conclusions

(1) None of the subjects who participated in the satisfaction survey responded that they were dissatisfied, and it was found that the pilot project improved the quality of care and helped patients understand the intestinal fistula. (2) Improvements are needed so that better medical services can be provided by improving the fee calculation criteria. (3) In order to revitalize the pilot project, it is necessary to cultivate manpower through quality education. (4) Along with cancer patients with ostomy, more diseases should be added to the home care pilot project.

A Long Journey towards Management of Enterocutaneous Fistula after cholecystectomy

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Background

Enterocutaneous fistula (ECF) is a challenging and often severe complication that involves an abnormal connection between the intestinal tract and the skin, leading to significant morbidity due to persistent drainage, infection risk, nutritional deficiencies, and prolonged hospital stays. Managing ECF is complex, requiring a multidisciplinary approach that may include nutritional support, infection control, wound management, and, in some cases, surgical intervention. The path to effective management is often prolonged and fraught with difficulties, reflecting the need for innovative and comprehensive treatment strategies. I would like to share my experience on the management of enterocutaneous fistula after cholecystectomy.

Case A 79-year-old female underwent open cholecystectomy for chronic cholecystitis with acute inflammation. On postoperative day 46, patient complained of fecal discharge from the incision site. Imaging study revealed an ECF originating from transverse colon. Segmental resection of transverse colon and hand-sewn anastomosis was performed, but the fistula returned on postoperative day 10. Beginning on March 11th, 2024, a long journey towards managing ECF began (Fig 1). Daily dressing with the use of nelaton catheter to foley catheter for the attempted closure of the ECF was tried (Fig 2a, 2b). However, rupture of the fistula due to the pressure from the foley balloon catheter formed an iatrogenic loop colostomy (Fig 3). Wound management was extremely difficult due to the spillage of feces from the colostomy to the incision site. After 3 months of daily dressings and colostomy changes, secondary healing of the wound was finalized. (Fig 4)

Conclusion

The management of enterocutaneous fistula (ECF), as illustrated by this case, is complex and challenging. The patient's journey involved multiple interventions, including segmental resection and innovative wound management techniques, reflecting the necessity for a comprehensive and adaptive approach. Furthermore, I would like to learn from experiences by expert surgeons in how they treated ECF.

Room 1

[Luncheon Symposium] Olympus

Chair

Seung Chul HEO
Seoul National University Boramae Medical Center, Korea

Room 1

Philip F. Caushaj Excellency in Teaching Award

Chair

Narimantas Evaldas SAMALAVICIUS
Klaipėda University Hospital, Lithuania

Kemal Ismail DEEN
University of Kelaniya Medical School, Sri Lanka

Education

Professional Experience

Room 1

[Colorectal Cancer] Curative Treatment for Oligometastasis

Chairs

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Professional Experience

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2018-	Professor of Radiation Oncology, St. Vincent's Hospital

Radiotherapy for liver oligometastasis

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Introduction of the concept for oligometastasis (OM) led to wide application of metastasis-directed local ablative therapies for metastatic colorectal cancer (CRC). By application of the metastasis-directed local ablative therapies including surgical resection, radiofrequency ablation (RFA), and stereotactic ablative body radiotherapy (SABR), the survival outcomes of patients with metastatic CRC have improved. The liver is the most common distant metastatic site in CRC patients, and recently various metastasis-directed local therapies for hepatic oligometastasis from CRC (HOCRC) are widely used. Surgical resection is the first line of metastatic-directed local therapy for HOCRC, but its eligibility is very limited. Alternatively, RFA can be applied to patients who are ineligible for surgical resection of liver metastasis. However, there are some limitations such as inferior local control (LC) compared with surgical resection and technical feasibility based on location, size, and visibility on ultrasonography of the liver metastasis. Recent advances in radiation therapy (RT) technology have led to an increase in the use of SABR for liver tumors. SABR is considered complementary to RFA for patients with HOCRC who are ineligible for RFA. Furthermore, SABR can potentially result in better LC for liver metastases >2-3 cm compared with RFA. In this article, the previous studies regarding curative metastasis-directed local therapies for HOCRC based on the radiation oncologist's and surgeon's perspective are reviewed and discussed. In addition, future perspectives regarding SABR in the treatment of HOCRC are suggested.

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RFA for liver oligometastasis

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Introduction

Liver oligometastasis is characterized by a limited number of metastatic cancer lesions in the liver, typically involving up to five lesions. This condition represents an intermediate phase between localized and widespread metastatic disease. Due to the limited number of metastases, local treatments such as surgery, radiofrequency ablation (RFA), or microwave ablation (MWA) can be effective, potentially leading to long-term disease control or even a cure in some cases.

Local Ablation Techniques

Local ablation techniques for liver tumors include RFA, MWA, cryoablation, percutaneous ethanol injection (PEI), and irreversible electroporation (IRE). RFA uses high-frequency electrical currents to generate heat that destroys cancer cells, guided by imaging techniques such as ultrasound or CT scans to target the tumor precisely. MWA, similar to RFA, uses microwave energy to produce heat that destroys cancerous tissue and is effective for treating larger tumors and multiple lesions. Cryoablation involves freezing tumor cells using a probe cooled with liquid nitrogen or argon gas, where the freezing and thawing cycles destroy the cancer cells. PEI involves injecting concentrated alcohol directly into the tumor, leading to cellular dehydration and protein denaturation, resulting in cell death. IRE uses electrical pulses to create permanent pores in the cell membranes, leading to cell death and is particularly useful for tumors located near vital structures as it causes minimal thermal damage. Among these techniques, RFA and MWA have been mainly used for the treatment of liver oligometastasis.

Effectiveness and Comparisons

According to Luo et al. (1), a study including 2,367 patients with colorectal liver metastases (CRLM) having ≤5 tumors each ≤5 cm showed that for CRLM ≤3 cm, surgical resection (SR) and ablation had comparable treatment efficacies. However, for CRLM >3 cm or with a high clinical risk score, SR resulted in longer liver recurrence-free survival than ablation. A meta-analysis by Yang et al. (2) involving 4,385 CRLM patients indicated that hepatic resection had lower rates of marginal and intrahepatic recurrence compared to RFA, with significantly longer 1-, 3-, and 5-year overall and disease-free survival rates.

Ablation margins greater than 5 mm are critical for local tumor control, with no local recurrence observed for margins over 10 mm. MWA has shown greater efficiency than RFA for tumors near vascular structures. In a study by Han et al. (3), ablation margins of at least 0.5–1.0 cm were necessary to minimize recurrence. Kurilova et al. (4) reported cumulative local tumoral progression-free survival rates at 1, 3, 5, 10, and 15 years as 85%, 74%, 73%, 72%, and 72%, respectively, and cumulative overall survival rates at 1, 3, 5,

10, and 15 years as 92%, 58%, 41%, 30%, and 28%, respectively.

Challenges and Advancements

The primary challenge with RFA is the insufficient ablative volume for larger metastases, often resulting in an inadequate ablative margin and leading to local recurrence. To address this, more powerful ablation devices and new techniques such as the no-touch RFA technique have been developed. The no-touch RFA technique uses clustered electrodes placed around the tumor, achieving a larger ablation zone and reducing the risk of tumor spreading by avoiding penetration through the tumor itself.

Conclusion

SR remains superior to ablation in terms of local tumor control and overall survival. However, recent studies show that the gap in treatment efficacy between RFA and SR is narrowing due to advancements in ablation technology and techniques (5, 6). More powerful ablation devices and innovative techniques such as the no-touch technique have significantly improved the outcomes of RFA, making it a viable and safe alternative for patients who are suboptimal candidates for surgery. Combining RFA with SR is an effective approach to achieve better oncological outcomes, particularly in patients with multiple liver metastases. Based on current trends and advancements in medical technology, the gap in treatment outcomes between ablation and surgical resection is expected to continue decreasing in the future, making RFA a more competitive option for liver metastases treatment.

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Stereotactic Radiotherapy for lung oligometastasis

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Oligometastatic disease represents an intermediate state of cancer spread, characterized by limited metastatic sites. Recent studies have shown that integrating local ablative therapies, such as surgical resection or stereotactic ablative body radiotherapy (SABR), with standard systemic therapies may improve long-term survival and potentially lead to a cure in select patients. Among various cancer types, non-small cell lung cancer (NSCLC) has demonstrated remarkable outcomes with SABR, particularly for tumors in the pulmonary region, establishing it as a standard treatment option when surgery is not feasible. This success in NSCLC has prompted the application of SABR to other malignancies with pulmonary oligometastases, including colorectal cancer (CRC).

In patients with pulmonary oligometastatic disease (OMD) from various cancer types, SABR has been increasingly utilized, offering a promising alternative to surgery, especially in cases where surgery is contraindicated or deemed high-risk. SABR provides a high local control rate, typically ranging between 80-90%, which is comparable to that achieved in NSCLC. However, despite these encouraging results, there are notable differences in outcomes between CRC and other cancers. For example, the overall survival rates following SABR in CRC pulmonary oligometastases are reported to be nearly equivalent to those achieved with surgical resection. Yet, the local control rate for CRC metastases is approximately 10 to 20% lower than that observed in NSCLC.

Several factors may contribute to this discrepancy, including the size of metastatic lesions, increased radioresistance due to prior chemotherapy, and challenges in delivering an optimal radiation dose. These factors underscore the need for continued research to refine SABR protocols and improve outcomes for CRC patients. Furthermore, there is growing interest in the potential of radiotherapy to modulate the tumor immune microenvironment. This modulation could enhance the effectiveness of immunotherapy in patients who exhibit poor responses to immune checkpoint inhibitors alone. Ongoing studies are exploring the synergistic effects of combining SABR with immunotherapy, aiming to identify patient subgroups who may benefit most from this approach.

The integration of SABR into the treatment paradigm for pulmonary oligometastatic CRC offers a valuable alternative to surgery, particularly in patients for whom surgical options are limited. While SABR achieves high local control rates, the relatively lower control rate in CRC metastases compared to other cancers highlights the need for further investigation into optimizing treatment parameters. Moreover, the potential for SABR to enhance the efficacy of immunotherapy through modulation of the immune microenvironment warrants continued exploration. Future research should focus on addressing these challenges to maximize the therapeutic benefits of SABR in the management of oligometastatic CRC.

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Education

1998-2004 Korea University College of Medicine, Seoul, Korea
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Received, Master of Medical Science
2009-2013 Korea University, Graduate School, Majored in Surgery
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2014-2018 Clinical Assistant Professor, Division of Colon and Rectal Surgery, Korea University Ansan Hospital, Ansan
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Case & Discussion

Woong Bae JI

Korea University, Korea

The management of oligometastatic colon cancer remains a significant challenge in the field of oncology, demanding a nuanced approach that balances the aggressive treatment necessary for potential cure with the preservation of the patient's quality of life. Oligometastasis, defined as a state where cancer has spread to a limited number of sites, offers a window of opportunity for curative interventions. However, the optimal treatment strategy is often unclear, requiring individualized decisions based on a variety of clinical factors. This presentation will delve into the complexities of treating oligometastatic colon cancer through an in-depth discussion of two illustrative cases.

The first case involves a 71-year-old female initially diagnosed with sigmoid colon cancer. The patient presented with colonic obstruction and was found to have locally advanced disease (cT3N1M0), which was managed with anterior resection followed by adjuvant chemotherapy. Despite initial treatment success, she developed a metachronous lung metastasis, detected 25 months post-surgery. The treatment plan included a VAT wedge resection of the lung lesion, followed by additional chemotherapy. Over the next several years, the patient experienced multiple recurrences, each managed through a combination of surgical interventions, including lobectomy, and systemic therapies such as cetuximab plus FOLFIRI and subsequent lines of chemotherapy. Despite these aggressive treatments, the patient eventually succumbed to the disease, highlighting the persistent challenge of managing oligometastatic recurrences in colon cancer.

The second case concerns a 50-year-old female who presented with rectal cancer and synchronous liver metastases, a more complex scenario requiring a multidisciplinary approach. With a history of diabetes, hypertension, and hyperlipidemia, along with an elevated CEA level, her initial diagnosis was rectal cancer (cT3N2M1) with multiple liver metastases. The treatment began with a combination of surgery and chemotherapy, specifically low anterior resection and liver resections, followed by systemic chemotherapy. Despite this, the disease trajectory was marked by ongoing challenges in managing the liver metastases, illustrating the difficulty in achieving long-term control in patients with synchronous oligometastasis.

These cases provide a platform for discussing the broader implications of treatment strategies for oligometastatic colon cancer. We will explore the roles of surgical resection, systemic chemotherapy, and the integration of newer modalities such as ablative therapies (e.g., radiofrequency ablation, microwave ablation) and stereotactic body radiation therapy (SBRT). The discussion will also consider the impact of molecular markers like K-Ras and N-Ras status on treatment outcomes, as these factors increasingly inform therapeutic decisions.

In conclusion, the session aims to shed light on the decision-making processes in the treatment of oligometastatic colon cancer, emphasizing the need for a personalized approach that considers the unique aspects of each patient's disease. By analyzing these cases, we hope to provide valuable insights into optimizing therapeutic strategies, ultimately aiming to improve patient outcomes in this challenging clinical scenario.

Room 2

[Colonoscopy Study Group] Endoscopic Removal of Colorectal Lesions

Chairs

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Northern Health, Melbourne, Australia

Eui Gon YOUK

Good-Jang Hospital, Korea

Kyung Su HAN
National Cancer Center, Korea

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Professional Experience

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Detection: Faculty Appointment

COI Disclosure

I have no personal or financial interests to declare:
I have no financial support from an industry source
at the current presentation.

Malignant polyp / Early Colorectal cancer (ECC)

	Tis	T1
Invasion depth	Mucosa	Submucosa
LN metastasis	No	10 % ~ 15 %
Treatment	Endoscopic	Endoscopic (20~30 %) or Surgical (70~80 %)

AJCC 7th Edition
Sonh DK, et al. J Clin Pathol 2007
Tominaga K, et al. Dis Colon Rectum 2005
Okabe S, et al. J Gastrointest Surg 2004

Treatment of T1 colorectal cancer (CRC)

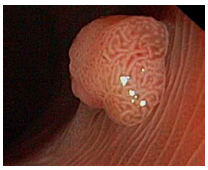
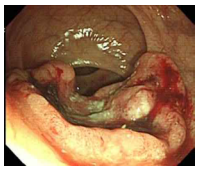
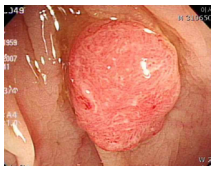
Subgroups	Risk factor*	Recommand
Low-risk T1 CRC	(-)	Endoscopic resection
High-risk T1 CRC	(+)	Surgical resection

* Risk factors of LNM

- Deep SM invasion
- Vascular invasion
- Histologic high grade
- Budding

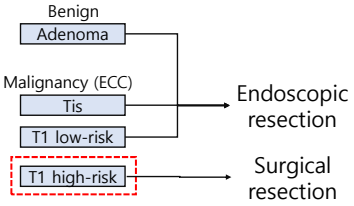
ASGE guidelines 2013
ESGE guidelines 2015
JSCCR guidelines 2014
대장암 진료 권고안 v.1.0 2012

Diagnostic steps for treatment plan decision

R/O benign polyp	R/O advanced cancer (Borrmann type I ~ VI)	R/O ECC (Paris type 0)
		
Biopsy … NO	Biopsy … YES	Biopsy … ???
⇩	⇩	⇩
Endoscopic resection (ER)	Surgical resection (SR)	ER or SR … ???

Biopsy for suspected ECC lesion

- Guidelines

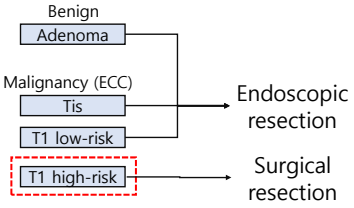


- Differential diagnosis by biopsy
  - Available for D/D: Benign, Malignancy
  - Not available for D/D: Tis, T1 low-risk, T1 high-risk

Biopsy for suspected ECC lesion

NO affect on decision making, ER or SR

- Guidelines



- Differential diagnosis by biopsy
  - Available for D/D: Benign, Malignancy
  - Not available for D/D: Tis, T1 low-risk, T1 high-risk

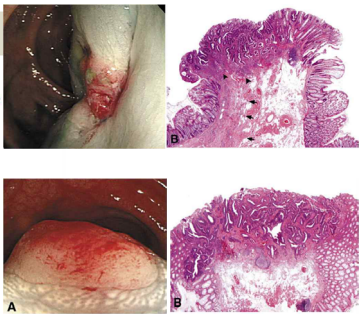
Biopsy may cause non-lifting sign in endoscopically resectable ECC

ORIGINAL ARTICLE: Clinical Endoscopy

Prolongation of the period between biopsy and EMR can influence the nonlifting sign in endoscopically resectable colorectal cancers (CME)

Kyung Su Han, MD, Dae Kyung Sohn, MD, Dong Hyun Choi, MD, Chang Won Hong, MD, Hee Jin Chang, MD, Seok-Byung Lim, MD, Hyo Seong Choi, MD, Seung-Yong Jeong, MD, Jae-Gahb Park, MD

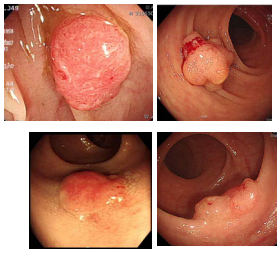
Goyang and Seoul, Korea



Han KS et al. Gastrointestinal Endosc 2008

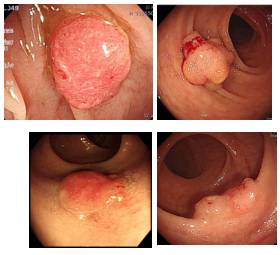
D/D for high risk T1 CRC before resection

- Biopsy not helpful
- Evaluation of risk factors
  - Deep SM invasion
  - Vascular invasion
  - Histologic high grade
  - Budding



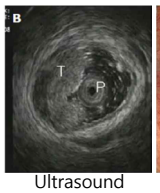
Evaluation of risk factors by imaging study

Risk factors	Evaluability
Deep SM invasion	+
Vascular invasion	-
Histologic high grade	-
Budding	-

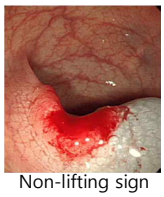


Evaluation of deep SM invasion

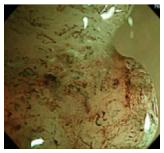
- Ulatrasound
- Non-lifting sign
- Surface pit-pattern
- Surface vascular pattern



Ultrasound


Non-lifting sign


Pit pattern

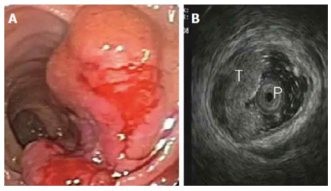

Vascular pattern

Evaluation of SM depth: ultrasound

- Accuracy of US for T staging
  90 % (63 ~ 96 %)

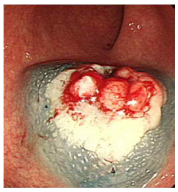
- But,
  not available for
  D/D low-risk T1 & high-risk T1
  - Deep SM invasion
  - Superficial SM invasion

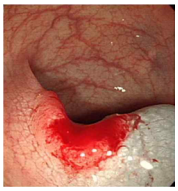
T staging T1 lesion



Marone P, et al. World J of Gastrintestinal Endosc 2015
Hurlstone DP, et al. 2005
Harada N, et al. Endoscopy 2001

Evaluation of SM depth: non-lifting sign


Lifting


Non-lifting

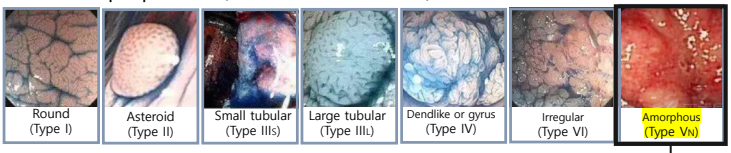
- R/O deep SM (sm3) invasion
- Technically difficult for ER

Research	SM depth	Non-lifting (%)
Ishiguro, et al	sm1	16.5
	sm3	100
Kato, et al	sm1	0
	sm3	72.7
Han, et al	sm1	17.6
	sm3	80.0

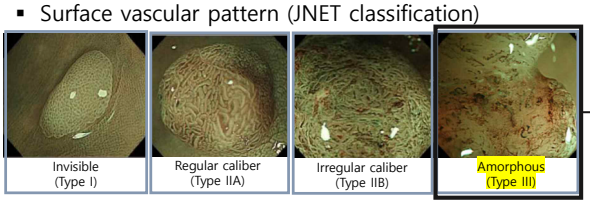
Ishiguro A, et al. Gastrointest Endosc 1999
Kato H, et al. Endoscopy 2001
Han KS, et al. Gastrointestinal Endosc 2008

Evaluation of SM depth: surface pattern

- Surface pit pattern (Kudo's classification)



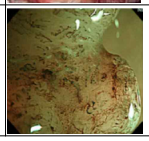
- Surface vascular pattern (JNET classification)



R/O deep SM invasion

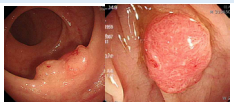
Tanaka, et al. Gastrointest Ensosc 2006
Okamoto et al. BMC Gastroenterol 2021

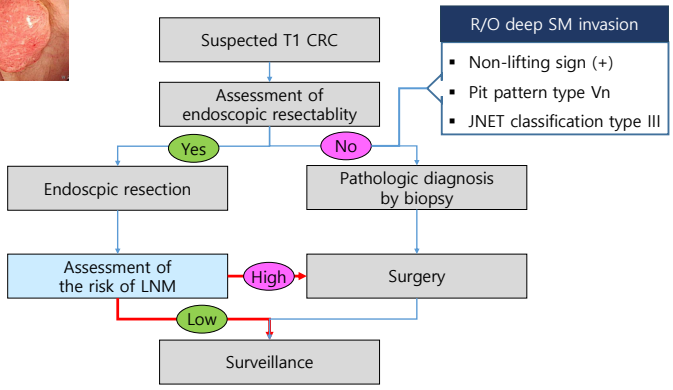
Surface pattern of deep SM invasion

Type	Endoscopic findings	Accuracy
Kudo's type V_N	 Loss or decreased of pits with an amorphous structure	85.1 %
JNET's type III	 • Loose vessel areas • Interruption of thick vessels	75 ~ 93 %

Satio Y, et al. Digestive Endoscopy 2023
Ikematsu H, et al. Digestive Endoscopy 2022

Critical pathway for R/O T1 CRC





Primary surgery is mandatory for all R/O deep SM invasion lesions ?

- Cons
  - Although high accuracy, not confirmative
  - RESEARCH

    Effects of prior endoscopic resection on recurrence in patients with T1 colorectal cancer who underwent radical surgery

    Hyun Jin Joo[1] · Jee Ung Seok[1] · Byung Chang Kim[2] · Dong-eun Lee[3] · Bun Kim[3] · Kyung Su Han[2] · Chang Won Hong[2] · Dae Kyung Sohn[2] · Dong Woon Lee[2] · Sung Chan Park[2] · Hee Jin Chang[4] · Jae Hwan Oh[2]

    Prior ER of T1 do
    not affect the survival &
    not significantly increase the costs
  - If technically feasible, try ER !!

Modalities	Accuracy for deep SM invasion
Non-lifting sign	72 ~ 100 %
Type III (JNET)	85.1 %
Type V_N (Pit pattern)	75 ~ 93 %

Satio Y, et al. Digestive Endoscopy 2023
Ikematsu H, et al. Digestive Endoscopy 2022
Joo HY, et al. Int J Colorectal Dis 2023

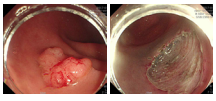
Pathological interpretation of endoscopically resected T1 CRC

- Risk factors of LNM
  - Depth SM invasion
  - Vascular invasion
  - Histologic high grade
  - Budding

Risk factor	Classified as	Recommand
absolutely absent	Low-risk T1	No surgery
If any one present	High-risk T1	Additional surgery

ASGE guidelines 2013
ESGE guidelines 2015
JSCCR guidelines 2014
대장암 진료 권고안 v.1.0 2012

What is problem ?



Endoscopically resected T1 CRC (n=453)

Prediction of the risk of LNM

Risk factors for LNM
- Histologic high grade
- Vascular invasion
- Deep SM invasion
- Budding

Risk factor (+) → high risk

Risk factor (-) → low risk

Additional surgery (n=349)

No additional surgery (n=104)

LNM (+) : 43 (12.3 %)
LNM (-) : 306 (87.7 %)

→ High false positive (Low specificity)

Ha, RK et al. ASTR 2017

Nomogram for the risk of LNM in T1 CRC

Cancer Res Treat. 2019;51(4):1275-1284 https://doi.org/10.4143/crt.2018.569

Original Article Open Access

Nomogram Development and External Validation for Predicting the Risk of Lymph Node Metastasis in T1 Colorectal Cancer

- 2 institutes joint research

Institute	Patients inclusion	Setting
NCC	833 (ER 154 / SR 679)	Development set
Daehang hospital	722 (ER 249 / SR 473)	Validation set

ER: endoscopic resection
SR: surgical resection

Oh JR, et al. Cancer Res Treat 2019

Nomogram for the risk of LNM in T1 CRC

- 5 risk factors (Logistic regression model)

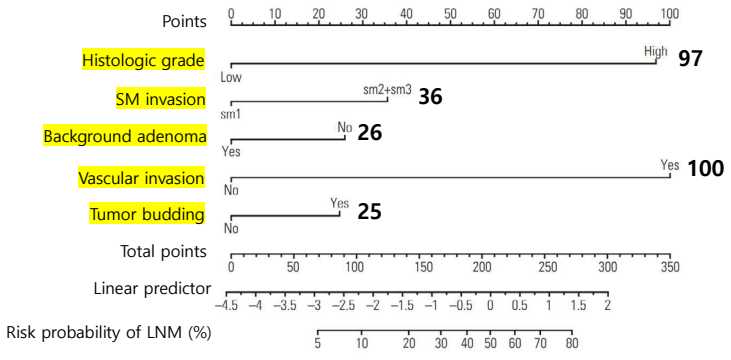
Valuables	Multivariate OR (95 % CI)	p
Deep SM invasion	2.14 (1.19-3.86)	0.0116
High grade	7.89 (2.89-21.52)	<.0001
Vascular invasion	8.45 (4.56-15.66)	<.0001
Budding	1.70 (1.03-2.80)	0.0394
Absence of BGA	1.72 (1.09-2.78)	0.0222

- Validation

Validation	Receiver-operator characteristics curve	Calibration plots
Internal	AUC = 0.812	HL-X^2 test = 1.266 (p=0.737)
External	AUC = 0.771	HL-X^2 test = 8.308 (p=0.040)

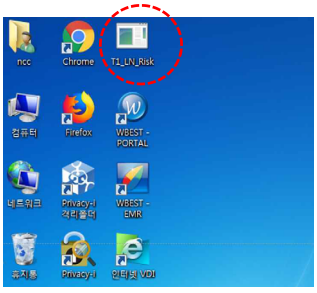
Oh JR, et al. Cancer Res Treat 2019

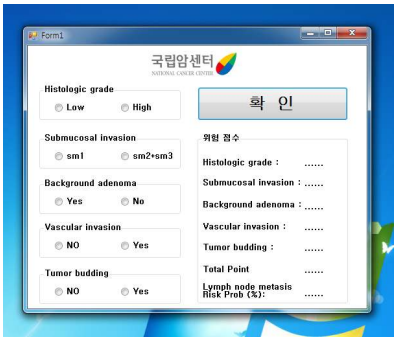
Nomogram for the risk of LNM in T1 CRC



Oh JR, et al. Cancer Res Treat 2019

Clinical application in NCC

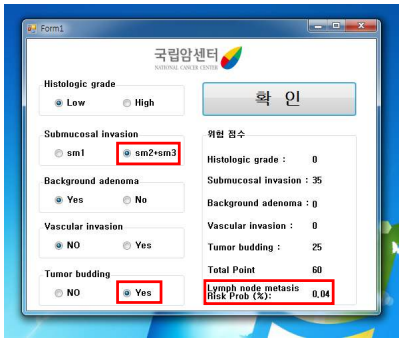




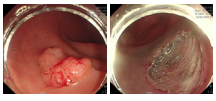
Clinical application in NCC

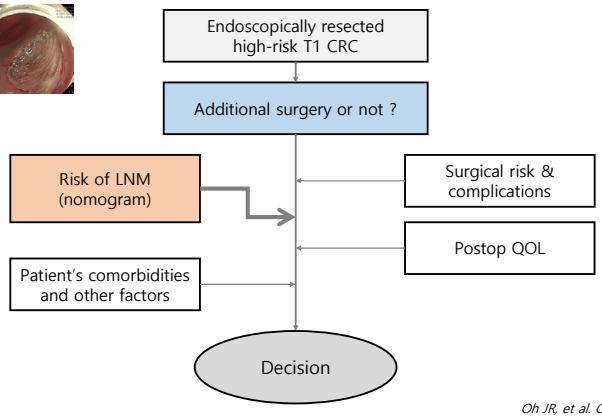
- In the case with
- deep SM invasion
- budding (+)

→ LNM risk … 4 %



Decision for endoscopically resected high-risk T1 CRC





Oh JR, et al. Cancer Res Treat 2019

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Education

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Professional Experience

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2009-2012 Chief Doctor, Division of Colorectal Surgery, Department of Surgery, Sunlin Hospital, Pohang, Korea
2012-2013 Clinical Assistant Professor, Department of Colorectal Surgery, Keimyung Univesity Dongsan Medical Center, Daegu, Korea
2013-2017 Assistant Professor, Department of Colorectal Surgery, Keimyung Univesity Dongsan Medical Center, Daegu, Korea
2015-2016 Research Fellow, Memorial Sloan Kettering Cancer Center, NYC, USA

Selection of an endoscopic resection technique based on the current guidelines

Woon Kyung JEONG

Keimyung University, Korea

Endoscopic resection of polyps is regarded as an efficacious method for the prevention of colorectal cancer and a reduction in mortality.

It is crucial to utilize the optimal endoscopic resection technique to ensure complete removal.

The objective of this lecture is to provide an overview of the selection of endoscopic resection techniques, with a particular focus on the current guidelines set forth by the United States and Europe for the treatment of colorectal polyps.[1, 2]

(1) Cold snare polypectomy is the recommended procedure for non-pedunculated diminutive polyps (≤5 mm) or small polyps (6-9 mm).

However, cold forceps (biopsy) polypectomy may be considered for polyps measuring up to 3 mm in diameter in cases where cold snare polypectomy is technically challenging.

(2) For non-pedunculated, medium-sized lesions (10-19 mm) with no suspicion of submucosal invasion, the recommended approach is either cold or hot snare polypectomy with or without submucosal injection.

(3) For non-pedunculated, large (≥20 mm) lesions with suspected submucosal invasion, endoscopic mucosal resection (EMR) is the recommended course of action.

It is recommended that all visible tissue be removed in a single session, and that thermal ablation of the margins be performed subsequent to removal, even in the absence of residual lesion.

(4) In the event that non-pedunculated, superficial submucosal invasion (less than 1,000 μm) is suspected, it is recommended that EMR or endoscopic submucosal dissection (ESD) be employed to ensure the safe and complete resection of the lesion.

(5) In cases where there is suspicion of non-pedunculated, deep submucosal invasion (≥1,000 μm), surgical intervention is advised.

(6) Hot snare polypectomy is recommended for pedunculated polyps with a head size of less than 20 mm and a stalk diameter of less than 5 mm.

(7) In the case of pedunculated polyps with a head size of 20 mm or greater, or a stalk diameter of 5 mm or greater, the risk of post-polypectomy bleeding is increased due to the presence of large vessels within the stalk. Therefore, prior to resection with hot snare polypectomy, it is recommended to perform prophylactic ligation of the stalk using endoloop or endoscopic clips.

References

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Education

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1992	graduated from Medical graduated school. Kyung Hee University

Professional Experience

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2003-2005	Staff, Department of Surgery, Namyanju Yang Hospital
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Performing safe & effective ESD

Eun-Jung LEE

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ESD enables us to achieve en-bloc resection for colorectal lesions ≥ 20 mm in size. However, there is a high risk of perforation because of the thinness and winding shape of the colonic wall.

During ESD, mucosal incision is performed after injection, followed by submucosal dissection. After appropriate dissection (trimming), we can make a mucosal flap and go below the lesion and the flap. Below the mucosal flap, the endoscope becomes stable and submucosal dissection becomes easier by submucosal traction made by distal attachments (caps). Making a mucosal flap and going below the lesion is a very important step to proceed the next submucosal dissection and to complete ESD safely.

This lecture introduces several techniques for performing safe and effective ESD.

1. Pocket-creation method

Pocket-creation method (PCM) is an ESD technique in which a small mucosal opening is created to allow entry into the submucosal space with the scope, and then dissection of all the submucosal space under the target lesion is performed before opening the margins. The advantages of PCM are improved scope stability and angle of access to the resection plane and a more durable fluid cushion.

2.Traction-assisted method

After achievement of mucosal incision and trimming of the submucosa, different traction techniques have been developed to lift the mucosal flap and provide better exposure of the submucosal space. In addition to the use of gravity, position changes, and distal attachments, diverse external and internal traction methods (clip-and-line, clip-and-snare, external forceps, internal traction wire, magnetic-assisted traction, and double-clip traction) can be used to decrease procedure time and adverse events.

3.Underwater ESD

After removing gas, the lumen is filled with saline or water and the procedure is performed below the liquid. The advantages of underwater ESD are better visualization of the submucosal dissection plane, because of traction (from the buoyancy of the mucosal flap) and magnification of the underwater image, which can be useful in cases of fibrosis or increased submucosal fat tissue.

4. Hybrid ESD

Hybrid ESD is an endoscopic treatment modality in which an incision is made around a lesion and snaring is performed after an adequate amount of submucosal dissection. It may shorten procedure time. In addition, it can be used as a rescue resection technique for difficult colorectal ESD cases.

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Professional Experience

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2011-2013	Korea University Anam Hospital : colorectal fellowship
2013-	Daehang Hospital

How to overcome the learning curve for EMR/ESD?; From the novice to expert

Jae Won SHIN

Daehang Hospital, Korea

Colorectal EMR (C-EMR) is the first-line treatment strategy for colorectal polyps. Endoscopic submucosal dissection (ESD) is an established method to treat early mucosal lesions of the upper and lower gastrointestinal tract. ESD achieves organ-sparing, en bloc, margin-negative (R0) resection of early neoplasms that were traditionally relegated to surgery or piecemeal endoscopic mucosal resection. Yet colonic EMR and ESD can be technically challenging, and outcomes are highly operator dependent. Studies from high-volume eastern countries' centers, where a structured learning environment with onsite expert tutors and an abundance of easier gastric lesions are uniformly present, estimate that trainees need about 30–40 ESDs to acquire early proficiency in gastric ESD. The recommendations of the ESGE and ASGE favor a step-up strategy for learning ESD. Training in ESD should be considered only by fully trained endoscopists. Proficiency in EMR and adverse event management is recommended before starting ESD training. Practice on animal and/or ex vivo models is useful to gain the basic ESD skills. ESGE recommends performing at least 20 ESD procedures in these models before human practice, with the goal of at least eight en bloc complete resections in the last 10 training cases, with no perforation. Live conferences and meetings are suggested before and during ESD training. ESGE recommends that at least the first 10 procedures in humans should be done under the supervision of an ESD-proficient endoscopist.

▶ **Fig. 1** Diagram summarizing the ESGE training curriculum for endoscopic submucosal dissection (ESD). EMR, endoscopic mucosal resection. Source: ESGE.

Room 3

[Special Session]
The most Exhausting & Difficullt Situations in Coloproctology

Chairs

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2011-Present Staff, Seoul Song Do Colorectal Hospital

Rectovaginal fistula surgical options - why do some cases fail?

Young Min JEON

Seoul Songdo Hospital, Korea

Rectovaginal fistula is a distressing condition characterized by an abnormal communication between the rectum and vagina. The classification and treatment options for rectovaginal fistula have been described in numerous papers and guidelines. However, determining the appropriate treatment for an individual patient is challenging, and the recurrence rate remains high.

While there may be various reasons for surgical failure, one primary cause is the inability to accurately identify the precise anatomical location of the fistula, which can lead to unsuccessful outcomes. The anal canal and pelvic floor muscles are structures that withstand abdominal pressure. Therefore, it is crucial to distinguish between cases where the internal opening is located in the anal canal and those where it is situated above the anal canal. Based on these distinctions, the conditions can be classified as rectovaginal fistula, rectocutaneous fistula, anovaginal fistula, and anocutaneous fistula (Fig. 1). Additionally, restoring an unstable pelvis, as seen in cases of perineal laceration, is crucial for preventing recurrence. An important aspect of surgery for perineal laceration is to ensure that each muscle layer is precisely aligned and sutured. It is also essential to accurately locate and address the internal opening of the fistula and to identify any hidden high-type fistulas.

It is necessary to evaluate for any underlying diseases, such as Crohn's disease or anal tuberculosis.

In cases with a history of previous radiation therapy or where surrounding tissue has undergone fibrosis due to anastomotic leakage following ultra-low anterior resection, more aggressive treatment options, such as completion proctectomy, should be considered rather than primary repair.

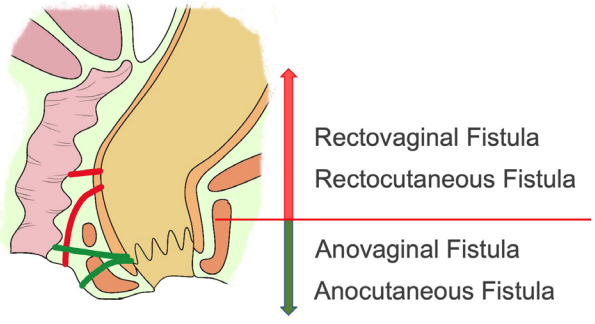

Fig 1. Definitions of fistula terms

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Education

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Professional Experience

1998-1999	Hon. Treasurer of Association of Colon & Rectal Surgeons of India from
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2000-2006	Associate Secretary of International College of Surgeons - Indian Section from
2007-2008	President, Association of Colon & Rectal Surgeons of India
2007-2010	Hon. Treasurer - International College of Surgeons - Indian Section
2007-2012	Governing Council Member - Association of Surgeons of India
2009-2011	President, Asia Pacific Federation of Coloproctology
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Education

1998-2004	Kosin University School of Medicine, Korea, Medicine, Diploma
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Optimal treatment for appendiceal neoplasm after appendectomy

Songsoo YANG

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Background

Incidental discovery of appendiceal neoplasms during appendectomy is increasingly common due to improved imaging and diagnostic techniques. The management of these incidental findings is crucial to optimizing patient outcomes and preventing potential complications.

Objective

To evaluate the current approaches for the treatment of incidentally discovered appendiceal neoplasms following appendectomy and to determine the most effective management strategies based on recent evidence.

Methods

A comprehensive review of recent literature and clinical guidelines was conducted. Data from multiple studies and case reports were analyzed to assess treatment protocols, including observation, additional surgical intervention, and chemotherapy. The analysis focused on outcomes such as survival rates, recurrence, and quality of life.

Results

The review identified a range of management strategies for incidentally discovered appendiceal neoplasms. For benign lesions, conservative management with regular follow-up was often sufficient. In cases of malignant neoplasms, additional surgical resection, chemotherapy, or a combination of both was recommended based on the tumor type and stage. The choice of treatment was influenced by factors such as tumor size, histological characteristics, and patient health status.

Conclusion

Optimal management of incidentally discovered appendiceal neoplasms varies depending on the nature of the tumor. While benign lesions generally require minimal intervention, malignant neoplasms often necessitate a more aggressive approach. Further research and standardized guidelines are needed to refine treatment protocols and improve patient outcomes.

Keywords

Appendiceal neoplasm, incidental findings, appendectomy, treatment strategies, malignant tumors.

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How can we know the risk of anastomosis leak - prevention and treatment

Jung Kyoung SHIN

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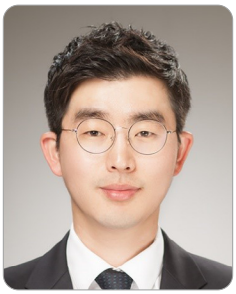
Anastomotic leak, or AL, is one of the most feared complications after colorectal cancer surgery due to its significant impact on patient outcomes. Not only does AL lead to longer hospital stays and potential reoperations, but it also affects long-term recovery and can compromise the success of oncological treatments. Anastomotic leak, commonly referred to as AL, is one of the most severe complications following colorectal cancer surgery. It has a profound impact on patient outcomes, with a significant increase in both morbidity and mortality when it occurs. The pathophysiology of anastomotic leak is complex and multifactorial. Ischemia, or poor blood supply to the anastomosis site, is a primary contributor, as it impairs tissue healing and increases susceptibility to breakdown. Additionally, tension on the anastomosis, whether due to surgical technique or intraoperative factors, can hinder proper healing and predispose the site to leakage. Infection and inflammation, often exacerbated by bacterial contamination, further compromise the integrity of the anastomosis. A deep understanding of these mechanisms is essential for effective prevention and management. Patient-related factors play a significant role in determining the risk of anastomotic leaks. Comorbid conditions such as diabetes, obesity, and cardiovascular disease are well-established risk factors, as they can impair wound healing and immune response. Nutritional status is another critical factor; malnutrition and low serum albumin levels are strong predictors of poor outcomes. Additionally, patient demographics such as age and gender influence the risk, with older patients and males generally at higher risk. Understanding these factors is crucial for tailoring preoperative interventions and improving patient outcomes. Preoperative assessment and optimization are critical for reducing the risk of anastomotic leaks. Utilizing risk stratification tools, clinicians can identify patients at higher risk of complications and implement targeted interventions. Nutritional optimization is particularly important, as correcting malnutrition and hypoalbuminemia can significantly improve healing outcomes. Smoking cessation is another key factor; patients who quit smoking before surgery experience better wound healing and reduced risk of AL. These preoperative strategies are essential for enhancing surgical outcomes and minimizing the risk of complications. Intraoperative strategies are crucial for preventing anastomotic leaks. Effective postoperative monitoring is essential for the early detection and management of anastomotic leaks. Regular biomarker surveillance, including C-reactive protein (CRP) and procalcitonin levels, can help identify inflammatory responses indicative of a leak. Routine imaging, such as CT scans, is also crucial, particularly in high-risk patients, as it allows for the detection of leaks before clinical symptoms become evident. These conservative approaches are often effective for managing minor leaks and stabilizing patients for further intervention if necessary. Surgical intervention becomes necessary when non-surgical management is insufficient to control an anastomotic leak, particularly in the case of large or symptomatic leaks. Indications for surgery include persistent sepsis, failure of conservative measures, or the presence of a significant leak that cannot be managed otherwise. Surgical options include direct repair of the leak and the placement of drains to control infection and prevent abscess formation. In severe cases,

the creation of a diverting stoma may be required to protect the anastomosis and allow it to heal. These surgical strategies are critical for managing complex leaks and preventing further complications. In conclusion, preventing and managing anastomotic leaks (AL) in colorectal surgery necessitates a comprehensive approach that integrates meticulous preoperative planning, precise intraoperative techniques, and vigilant postoperative monitoring. Patient-centered care, where interventions are tailored to individual risk factors, is critical in improving outcomes and reducing the incidence of AL. As we look to the future, ongoing research and the adoption of new technologies will play an increasingly important role in enhancing our capabilities to prevent and manage this serious complication. By staying informed and adapting to these advances, healthcare professionals can significantly improve patient care and outcomes.



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Professional Experience

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Emergency treatment for lower GI hemorrhage

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Lower gastrointestinal bleeding (LGIB) presents a formidable clinical challenge, especially as it constitutes a significant proportion of gastrointestinal hemorrhages, with a notable prevalence in the elderly demographic. Prompt and effective management of LGIB is vital to avert severe complications such as hemodynamic instability, extended hospital stays, and increased risk of mortality.

The initial response centers on swiftly stabilizing the patient's hemodynamics, which involves aggressive fluid resuscitation, administration of blood transfusions, and the cautious application of vasopressors in cases where hypotension persists despite initial measures. Simultaneously, a methodical diagnostic strategy is crucial, with colonoscopy serving as the primary method for pinpointing and addressing the bleeding source. When colonoscopy does not yield conclusive results or cannot be performed, additional diagnostic tools like computed tomography angiography (CTA) and tagged red blood cell scintigraphy become essential in identifying the bleeding site.

Endoscopic treatment remains the foundation of emergency intervention, with techniques such as clipping, thermal coagulation, and injection therapy demonstrating high efficacy in achieving hemostasis. For patients who continue to bleed or experience recurrent bleeding despite endoscopic measures, interventional radiology offers a critical alternative through angiographic embolization. In scenarios where both endoscopic and radiological approaches are unsuccessful or impractical, surgical interventions, such as segmental resection or subtotal colectomy, may be required.

Recent advancements in pharmacological management, notably the use of proton pump inhibitors (PPIs) and somatostatin analogs, have further refined treatment protocols by enhancing patient stability and reducing the likelihood of rebleeding in certain situations. Moreover, the increasing recognition of a multidisciplinary approach—integrating the expertise of gastroenterologists, interventional radiologists, and surgeons—is proving essential in optimizing patient outcomes in the emergent management of LGIB.

Ademola ADEYEYE

King's College Hospital, London and Afe Babalola University, Nigeria

Education

Ademola is a General Surgeon and Surgical Oncologist from Nigeria. He graduated from the University of Ilorin as the overall best medical student in his cohort. His training in General Surgery took place at the University of Ilorin Teaching Hospital. His additional academic qualifications include a Masters in Clinical trials from the London School of Hygiene and Tropical Medicine of the University of London, a certificate in Leadership and Management in Health from the University of Washington, USA and a Post Graduate Diploma in Education from Open University of Nigeria. He is also an Associate Professor of Surgery at Afe Babalola University,Ado-Ekiti(ABUAD), Nigeria.

Professional Experience

He became a Fellow of the West African College of Surgeons (FWACS) in 2012. He had a Fellowship in Minimal Access Surgery (FMAS) in 2013 from India. He became a Fellow of the European Board of Surgery (FEBS) in 2018 as well as a Fellow of the American College of Surgeons(FACS) in 2019. He subsequently obtained a Fellowship of the Royal College of Surgeons of England (FRCS) in General Surgery in 2022 and was elected as a Fellow of the Royal College of Surgeons of Edinburgh in 2023.

He is a recipient of many prestigious fellowship trainings including the Soudavar Surgical Oncology fellowship at Memorial Sloan Kettering Cancer Centre, NY(USA), the General and Visceral Surgery fellowship at the University of Heidelberg (Germany), the Smith International Surgical fellowship by the Cleveland clinic, Florida (USA) as well as the Visiting Clinical fellowship in Colorectal Surgery at University Hospitals of Leicester NHS trust, UK under the European Society for Surgical Oncology scholarship for young surgeons. He is currently the President of the Nigerian Society for Colorectal disorders (NSCRD) and served as a technical consultant in developing the World Health Organization 2023 report on the Global Breast Cancer Initiative. He is also a Senior Surgical Research and Doctoral Fellow in Colorectal Surgery at King's College London, UK.

Room 4

[Wound & Ostomy Study Group]
Session 4. System and Quality Improvement for Ostomy Care and Rehabilitation

Chairs

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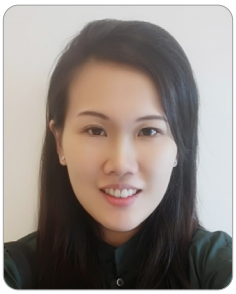

Zhao Yu Jacqueline TEO

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Education

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2017	Graduate Diploma in Nursing (Wound, Ostomy and Continence)
2011	Advanced Diploma in Gerontology
2013	Bachelor of Science with Distinction
2008	Diploma in Nursing

Professional Experience

Registered nurse since 2018

Worked in Singapore General Hospital in multi-disciplinary ward from 2008 to 2016, specialty nurse in wound and ostomy in Sengkang General Hospital from 2016 to 2021. Currently in Vickycares which provides homecare services to patients in Singapore

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The Jikei University, Japan

Education

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2008	Certified Nurse in Wound, Ostomy and Continence Nursing
2015	The Jikei University Graduate School of Medicine
	Medical Research Department of Medical Science Master's Couse
2022	Certified Nurse Administrator

Professional Experience

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Improving Patient Benefit related with Ostomy Usage for Better Life

Akiko EGAWA

The Jikei University, Japan

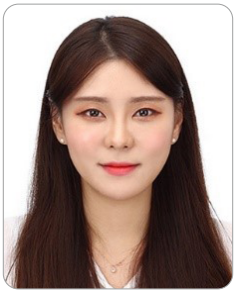
In Japan, rectal preservation surgery has become mainstream, and temporary ileostomies are becoming more common than permanent stoma construction.

The care method for ileostomy is complicated due to the volume and nature of the excrement. This often makes self-care more difficult. Furthermore, because of the loop stoma, the gap between the cuts is likely to open, making it easier for diarrhea to adhere and cause skin problems. Care is difficult and skin disorders are likely to occur, but with simple care, we aim to continue stable care and live a better life. Therefore, we continue outpatient support until the stoma is closed.

Especially after discharge from the hospital, we will shorten the intervals until stoma care has stabilized, and we will manage the peristomal skin and provide self-care support.

Patients who receive adjuvant chemotherapy after surgery will have a stoma for a longer period of time. Skin problems may also occur. Additionally, hand-foot syndrome makes self-care difficult, so we provide outpatient support in conjunction with chemotherapy.

We continue to provide outpatient support so that ostomates can enjoy a better life. We will explain the importance of outpatient support by presenting actual cases.



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Home Care Programs in Ostomy Patients with Cancer

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Backgrounds

It is difficult to manage patients because it is impossible to check whether cancer patients who need continuous management are properly managing the disease at home, and patients need to come up with improvement measures for their lack of management because they have fear of medical management and risks such as infection at home, not at the hospital. Therefore, cancer patients continue to receive medical care services at home, and it is necessary to prepare a compensation system for providing home medical services such as education and counseling on patient management to prevent deterioration of patient life due to worsening disease and long-term hospitalization.

The home care pilot project for cancer patients was developed because it required home care services for cancer patients so that patients discharged from the hospital after cancer treatment could receive patient-centered home care services at home. In addition, the health insurance fee for education counseling and management fees was developed to promote the offender project to increase the efficiency of management by checking the condition of cancer patients and providing feedback.

Methods

The home medical team registered in the pilot institution provides medical services such as self-management education, counseling, and non-face-to-face management for cancer patients who need continuous home management after ostomy surgery.

The pilot project period is three years, of which the status, satisfaction, and demand of the home medical pilot project for cancer patients with ostomy were investigated for nurses belonging to the KAWOCN (Korean association of Wound Ostomy Continence nurses) from November 13 to March 19, 2022.

Results

None of the subjects who participated in the satisfaction survey responded that they were dissatisfied with the home medical pilot project, and the pilot project helped improve the quality of care and help patients understand the ostomy. However, there were opinions that there are many restrictions in the clinical environment because the number of training sessions, which is limited to six times per year, is not appropriate because the need varies from patient to patient, and in the case of patient management fees, it can be calculated as one time only when it is performed at least twice a month.

Conclusions

1. Improvements need to be made to provide better medical services through improvement of the fee calculation standard. The limit on the number of training sessions that can be calculated per year for the current pilot project may not provide sufficient educational opportunities for patients.
   It is necessary to improve the current calculation standard, which is equally limited to a maximum of 6 times a year, by comprehensively considering the patient's complications, side effects, the type of ostomy surgery, and the understanding of ostomy education.
2. Since nurse personnel with expertise and experience are needed to revitalize the pilot project, maintaining the professionalism of nurses and fostering new personnel through professional ostomy nursing education are expected to help improve the performance of the pilot project.
3. In addition to cancer patients with ostomy, more diseases should be added to home medical pilot projects. It is necessary to identify diseases that require home medical services early and evaluate whether the disease requires home medical services.

Sanghyun AN

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Education

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Professional Experience

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2021-2023 Clinical Assistant Professor, Acute Care Surgery, Wonju Severance Christian Hospital

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2024-present Assistant professor, Division of Colorectal surgery, Wonju Severance Christian Hospital

Digital Based Home Care Service for Ostomy Patients: KWOSG RCTs

Sanghyun AN

Yonsei University Hospital, Korea

Backgrounds

Postoperative stoma formation, whether temporary or permanent, is often necessary following colorectal cancer surgery, particularly in rectal cancer surgery. According to previous studies, the rate of permanent stoma formation in rectal cancer surgery is approximately 15-20%. Stoma-related complications include skin problems, stoma hernia, retraction, bleeding, and even acute kidney injury (AKI) due to dehydration. These issues significantly reduce the patient's quality of life and outcomes. These issues negatively impact the quality of life for stoma patients, affecting their psychological, social well-being, and placing emotional burdens on their caregivers. Therefore, effective stoma management remains a constant challenge for both patients and colorectal surgeons.

Nowadays, the advancement of digital and mobile technology, particularly smartphones, which are used by nearly everyone, is remarkable. Therefore, healthcare services utilizing these technologies are being developed across various fields, bringing significant benefits to patients. These digital healthcare services have been developed and researched for stoma care as well.

As part of this effort, we aim to enhance the physical, psychological, and social aspects of stoma care by providing a self-management service via a smartphone application, and to evaluate the impact of this digital-based application on patients' quality of life.

Method

This multicenter prospective study will include patients who have undergone colorectal cancer surgery and received either a colostomy or ileostomy, provided they are comfortable using digital devices like smartphones. Patients will be randomly assigned to either the intervention group, receiving stoma care through a smartphone application, or the conventional group, receiving standard outpatient-based care. The intervention group will use a mobile application where patients input their stoma condition twice a month, allowing healthcare professionals to monitor and manage their care. The app provides patients with information on diet, physical activity, stoma care, emotional support, and daily living needs. Both groups will be assessed for outcomes at the time of enrollment, and at 1 and 6 months. Outcome measures include stoma-related complications such as peristomal dermatitis, dehydration, acute renal failure, readmission due to stoma-related issues, and quality of life and emotional state assessments using EQ-5D-5L and Stoma Quality of Life questionnaires.

Discussion

Mobile health care services are increasingly used across various fields and, when appropriately implemented, can offer significant benefits to patients. This study seeks to validate the effectiveness of a mobile application-based stoma care service and its positive impact on the quality of life and well-being of patients with stomas following colorectal cancer surgery.

Grand 1+2+3

[ABSTRACT]
Video Presentation 3

Chairs

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Fascia Latae Graft in Colorectal Surgery: A New Practical and Aesthetic Way Of Fixing Ileal Pouch Prolapse.

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Background/aims

Ileal pouch prolapse is a rare complication after J-pouch formation. Various synthetic materials have been described to repair ileal pouch prolapse. The purpose of this surgical video is to present a case of the use of fascia latae tendon as an aesthetic and practical method of repairing ileal pouch prolapse.

Methods

The informed consent was obtained and validated by the institutional review board.

Results

The case involved a 30-year-old female patient with a genetic diagnosis of familial adenomatous polyposis who underwent total proctocolectomy with ileoanal J-anastomosis (ileal pouch) in 2021. Two months after the surgery, she presented to the emergency department with the sensation of a mass protruding through the anus, occasionally requiring manual reduction associated with fecal incontinence. Partial prolapse of the anterior surface of the ileal pouch was diagnosed. She underwent ventral pexy of the pouch via laparoscopy. Adhesions to the posterior surface of the uterus were noted, resulting in a partial volvulus caused by these adhesions. The ileal pouch adhesions were dissected and the peritoneum was dissected from the sacral and lateral promontories of the ileal pouch caudally to the pouch fundus. Anterior fixation of the pouch was performed with a 15*15 cm autologous fascia latae graft (obtained from plastic surgery). It was attached to the sacral promontory with a SECURESTRAP® absorbable fixation device and 2-0 polypropylene. There were no complications during her hospital stay. No ileal pouch prolapse was observed at follow-up. The video is available in this link: https://drive.google.com/file/d/1ZJCD_buMnYyxFaTmlV87nsTCV6b8b-0L/view?usp=sharing

Conclusions

Laparoscopic ileal pouch fixation with autologous fascia latae graft appears to be a viable option in the surgical treatment of ileoanal pouch prolapse.

keyword

Pelvic Organ Prolapse, Fecal Incontinence, Fascia Latae, Colonic Pouches

The Approach to the Surgical Management of Complicated Diverticulitis in the Transgender Population: Case Report and Literature Review

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Background

In this case, we present a 29-year-old transgender male with medically refractory Hinchey 2 diverticulitis despite multiple percutaneous drain placements and prolonged antibiotics. Imaging revealed a recurrent pelvic abscess with the inflammatory process involving the uterus and adnexa. Given this patient's desire for future gender affirming surgery (GAS), pre-operative considerations and counseling included the possibility of a total hysterectomy in conjunction with a sigmoidectomy.

Methods

This patient was planned for a robotic assisted laparoscopic sigmoid colectomy. Intraoperatively, copious adhesions with abscess formation were identified to the anterior abdominal wall and adnexa. After an intraoperative gynecology consultation, this patient underwent a total hysterectomy with bilateral oophorectomy. The sigmoid colon specimen was subsequently delivered vaginally before the vaginal cuff was closed and a colorectal stapled anastomosis was created.

Results

This patient tolerated the procedure well and the post-operative course was uncomplicated. He has not followed up with gynecology.

Conclusions

The transgender population faces many healthcare disparities that are compounded by poverty, harassment, and discrimination. Studies have shown that the transgender population has decreased access to medically necessary care, increased incidence of mental health illnesses, increased prevalence of malignancy, and a decreased rate of screening for malignancy despite having a higher lifetime prevalence of known risk factors. Therefore, a holistic approach with special considerations is needed when managing a transgender surgical patient. In particular, the desire for GAS should be discussed pre-operatively. GAS has been shown to reduce the prevalence of mental health disparities and the need for certain cancer screenings in the transgender patient. Without these considerations, patients who undergo GAS in the form of hysterectomies in the future will be at a higher risk of complications than a patient with a virgin abdomen

keyword

Diverticulitis, Transgender, Gender Affirming Surgery

Room 1

[Emerging Robot System] Newly Introduced Advanced Robotic Surgery Systems

Chairs

Paul SELVINDOSS Gleneagles Hospital, Malaysia

Jeong-Heum BAEK Gachon University Gil Medical Center, Korea

David D.E. ZIMMERMAN

Elisabeth - TweeSteden Hospital, Tilburg, Netherlands

Professional Experience

After growing up in the most beautiful and picturesque area of the Netherlands, the Province of Zeeland, David Zimmerman went to medical school (graduating with honors) and underwent surgical training at the Erasmus University in Rotterdam, the Netherlands. During this time, he obtained his PhD for his dissertation on fistula surgery. After a fellowship in London and observerships in the United States (Dutch Society of Gastrointestinal Surgery Travelling Bursary) and Japan (ESCP Japanese Travelling Fellowship) he specialized in colorectal surgery at Diakonessenhuis Utrecht after which he was EBSQ board certified in 2011. He then became a consultant colorectal surgeon at Elisabeth-TweeSteden Hospital in Tilburg, The Netherlands.

He was responsible for the implementation of minimally invasive colorectal surgery, followed by many more innovations, culminating in the current Hugo RAS robotic programme. His main research and educational interest is the treatment of perianal fistulas, having authored over 40 international peer-reviewed articles, multiple instructional videos and several book chapters on this topic. David hosts a patient-oriented YouTube channel the “FistelVlog”. He is one of the authors of both the Dutch and European (ESCP) guidelines on Fistula Surgery and organizes the annual ESCP “hands-on” fistula course. Currently he is supervising 2 PhD candidates on the topic of Treatment of Perianal Fistulas. Besides the Research performed by the multidisciplinary Tilburg Colorectal Research Group, David is an active collaborator in the IWWD (International Watch-and-Wait Database), participant in the ESCP Cohort studies and PLCRC Study Group. These activities resulted in 120 peer-reviewed publications in the past years.

David is a member of the Medical Executive Board of ETZ-hospital and also active in national and international scientific societies. Currently he is Vice-president of the Dutch Society of Colorectal Surgeons and a member of the executive board of the European Society of Coloproctology. He is secretary of the Union of European Medical Specialists division of Coloproctology, organizing the European EBSQ Exam in Coloproctology, the foremost pan-European certification for Colorectal Surgeons.

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Education

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Professional Experience

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2002-2005	Chief of Colorectal Unit, Surgical Department of the Vilnius University Hospital Santariskiu Clinics Center Branch, and endoscopist at the department of gastrointestinal endoscopy
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2013-2015	Director of the Oncology Institute of Vilnius University Chief of Center of Oncosurgery
2015-2017	Chief of Center of Oncosurgery National Cancer Institute
2017-	Chief of Division of Surgery, Klaipeda University Hospital

The Senhance® Surgical System with Digital Laparoscopy

Narimantas Evaldas SAMALAVICIUS

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Introduction

First robotic surgery on human was performed back in 1997. In 2001, the da Vinci robotic system (Intuitive, USA) has been introduced into surgical field. For quite a while robotic surgery has been associated only with the name „da Vinci". Senhance® robotic surgical system (now by Asensus Surgical, Raleigh, USA), at that stage called ALF-X, was approved in 2012. At the moment, there are already several major players in robotic field globally, having FDA and/or CE certification, and around a hundred different robotic surgical initiatives worldwide in different countries. The aim of this presentation is to describe current overall experience with Senhance robotic system in colorectal surgery.

Materials and methods

Robotic program using Senhance robotic system in Klaipeda University Hospital (Klaipeda, Lithuania) has been started in November, 2018. In March 2023, we upgraded our Senhance system with the newest version, which among other features (like 5 mm articulating robotic instruments) enabled the use of augmented intelligence features in robotic Senhance surgery. This is the first and the only system up to date having approved use of AI modalities in robotic surgery. In early 2024, our multidisciplinary robotic program exceeded 1000 robotic surgeries, and we have a current experience with 195 robotic colorectal resections. Experience of our center and review of existing literature is presented.

Results

Experience from our center using Senhance robotic system demonstrated acceptable complication rate with low conversion rate in colorectal robotic surgery. All the other reports in the literature on colorectal Senhance surgery support our data. AI features namely Smart Zoom, Follow Me, Follow Us, Go To, Digital Tags, Linear Measurement and Contour Measurement in our hands justified their use in daily surgical practice.

Conclusion

Review of current literature and our experience with different types of robotic colorectal resections allow us to state that Senhance® robotic system is feasible and safe in colorectal surgery, and wider implementation of this system in our specialty worldwide is simply a question of time. AI use in robotic surgery opens the new era and new horizons in this type of minimally access surgery.

Key words

Robotic surgery, colorectal surgery, minimally invasive surgery, AI

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New Davinchi Systems

Jong Lyul LEE

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Robotic surgery system has revolutionized the field of minimally invasive procedures, and several robotic surgery systems have recently introduced to push the boundaries further with their latest technological advancements. Currently, the most widely used robotic surgery system in the world is the da Vinci system from the Intuitive Surgical. This robotic surgery system has continued to develop, and the 5th generation da Vinci system (Gen 5) was recently announced and is being used in the United States, but has not yet been approved in Korea. As is widely known, this advanced robotic surgery systems are designed to enhance the capabilities of surgeons through improved dexterity, superior visualization, and greater control during procedures.

Compared with da Vinci Xi system, the latest model currently in use, the major upgrades of the Gen 5 may include advancements in convenience for surgeons. Some of the characteristic aspects are that the Gen 5 platform features an improved surgeon console with a more intuitive control interface, the system upgrades the 3D visualization, tactile sense, and real-time fluorescence image, and the system includes real-time data sharing and enhanced coordination among the surgical team, leading to more streamlined and efficient procedures.

Personally, I have no experience using it in actual clinical practice, but through this lecture, I will introduce what I have encountered through dry laboratory test.

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Professional Experience

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Professional Memberships :

2022-2025	Lithuanian Association of Surgeons, President Elect
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Room 2

[Plevic Floor Disorder Study Group]
Consensus on Evaluation and Management of POP

Chairs

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Education

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Professional Experience

2010-2012	Colorectal fellow: Korea University Guro Hospital
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2013-2017	Colorectal clinical assistant & associated professor: Korea University Ansan Hospital
2020-2021	Colorectal observaship: St. Mark's Hospital, UK
2019~present	Professor: Korea University Hospital

What are the proper evaluation and diagnostic tools for POP?

Kwang Dae HONG

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Contents

pelvic organ prolapse (POP) is defined by the International Urogynecologic Association and International Continence Society joint report on the terminology as "the descent of one or more of the anterior vaginal wall, posterior vaginal wall, or apex of the vagina. They describe the POP through its relationship with vagina. Rectal prolapse is a condition wherein the rectum slips down from its original position and protrudes from the anus. Even though the protruding position is different, both are pelvic conditions, and the concept of treatment is similar. POP is a common condition, and up to 20% of women in western countries undergo prolapse surgery during their lifetime. POP can be associated with other pelvic floor symptoms, such as incomplete bladder and bowel emptying, frequent urination, urinary and anal incontinence, and sexual dysfunction.

Pelvic floor support is defined, in large part, by the complex and dynamic interactions of the muscles and connective tissue attachments within the bony pelvis.

Integral theory (IT), developed by Dr. P.E. Petros in 1990, states that POP and symptoms of chronic pelvic pain and bladder and bowel dysfunction are mainly caused by lax suspensory ligament (Fig. 1). IT has expanded in step with surgery to become the ITS which means a ligament-based system of surgery.

The structured assessment pathway can be conducted based on IT. Firstly, we can check various pelvic symptoms using validated questionnaires. Secondly, we measure grade of anatomical prolapse using POP-Q system. Thirdly, diagnostic tools such as urodynamics, pelvic ultrasound, and MR defecography can be used.

With these collected data, we can assess the damaged zone. **Multidisciplinary assessment** should be conducted from initial assessment to best understand which specialties should be involved in symptom management.

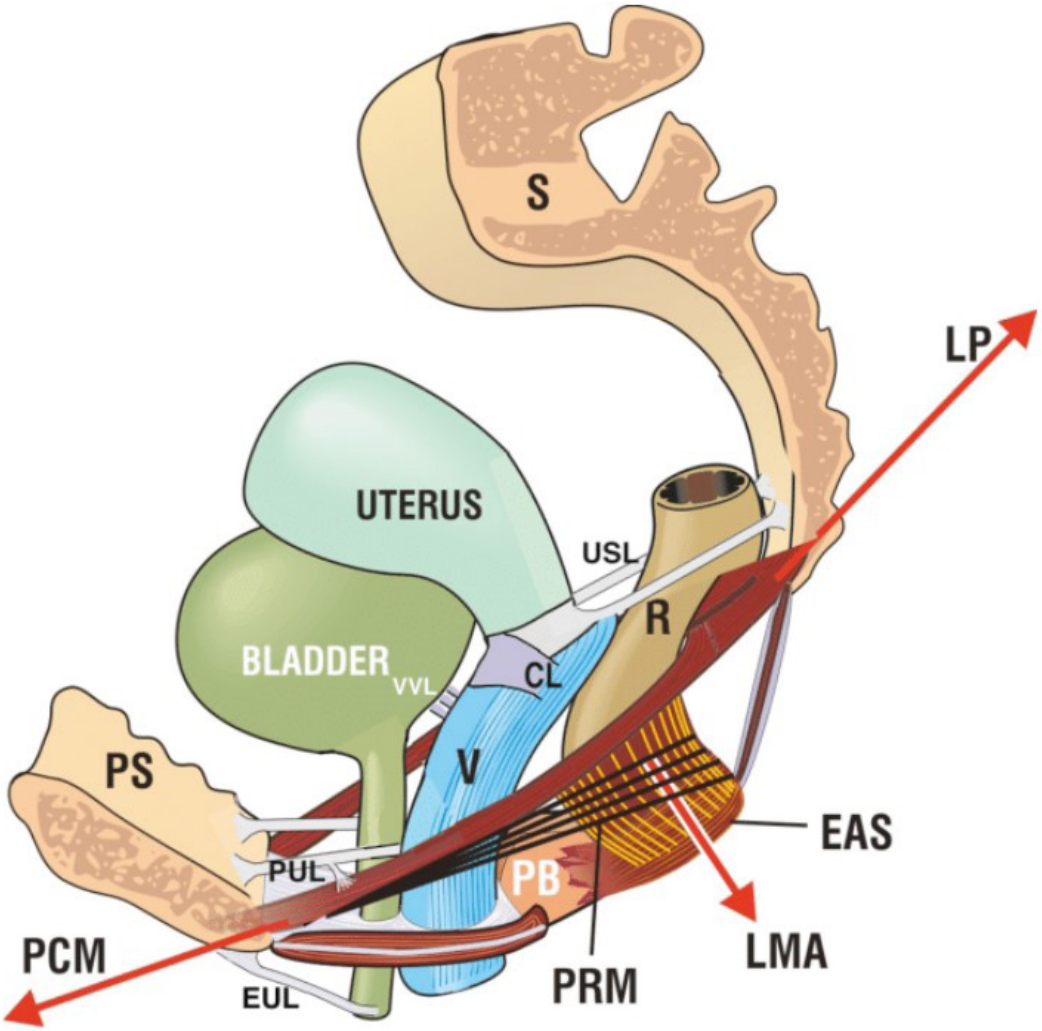

Fig. 1 Fascial attachments and tensioning mechanism based on integral theory (PS; pubic symphysis, PCM; pubococcygeus m., PUL; pubourethral lig., EUL; external urethral lig., V; vagina, CL; cardinal lig., USL; uterosacral lig., PB; perineal body, PRM; puborectalis m., R; rectum, LMA; longitudinal m. of anus, EAS; external anal sphincter, LP; levator plate.

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Outcome measure for POP

Han Deok KWAK

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Pelvic organ prolapse (POP), like all pelvic floor disorders, is a multidimensional phenomenon and treatment success is often difficult to define. Historically, most studies evaluating the treatment of pelvic organ prolapse have focused exclusively on anatomic success without considering other important areas such as symptoms, quality of life, or socioeconomic outcomes. For an individual patient, the most important outcome of a surgical procedure is the relief of her symptoms and improvement in her quality of life, yet until recently these areas have largely been ignored. Fortunately, over the last 15 years, measures to evaluate POP have improved; there is now an internationally-accepted and reliable assessment of the anatomic support and a number of valid, reliable and responsive symptom questionnaires and condition-specific instruments. A recent joint report from the International Continence Society (ICS) and International Urogynecology Association (IUGA) recommended that the following outcomes be reported in studies of POP surgery: Objective, Patient reported outcomes (PROs), Satisfaction, Quality of Life, and Perioperative data. A careful report of short- and long-term complications are also essential to assess the risk-benefit ratio of each procedure.

To summarize, surgical success of POP should use a variety of definitions with differing requirements for anatomic, symptomatic, or re-treatment(reoperation) outcomes as well as outcome evaluation (PROs and QoL). The most valid way of measuring the presence, severity, and impact of pelvic floor symptoms on a patient's activities and well-being is through the use of psychometrically robust self-administered questionnaires. Questionnaire development is a complex process that is governed by the principles of psychometrics. Psychometrics is the science of the measurement of responses to phenomena that are not easily quantifiable. For a questionnaire to be useful in research or in practice, it must demonstrate three important psychometric properties: validity, reliability, and responsiveness. An increasing number of questionnaires for pelvic floor disorders are now available. Most are intended to evaluate lower urinary tract symptoms, but recently, questionnaires have been developed for fecal incontinence and pelvic organ prolapse. In general, these questionnaires can be separated into one of three categories and recommended questionnaires are listed below: 1) those that measure the presence of particular symptoms and their severity (Symptom questionnaires); 2) those that measure quality of life (Quality-of-Life questionnaires), and 3) those that measure sexual function (Sexual Function questionnaires).

Recommended Symptom Questionnaires

Sandvik Incontinence Severity Index

Urogenital Distress Inventory (UDI)

Urogenital Distress Inventory short form (UDI-6)

Kings Health Questionnaire
Fecal Incontinence Severity Index (FISI)
Pelvic Floor Distress Inventory (PFDI)
Pelvic Floor Distress Inventory short form (PFDI-20)

Recommended Quality-of-Life (QOL)

Generic Quality-of-Life Questionnaires
SF-36
Condition-Specific Quality-of-Life Questionnaires
Incontinence Impact Questionnaire (IIQ)
Incontinence Impact Questionnaire short form (IIQ-7)
Kings Health Questionnaire
Pelvic Floor Impact Questionnaire (PFIQ)
Pelvic Floor Impact Questionnaire short form (PFIQ-7)

Recommended Sexual Function Questionnaires

Prolapse and Incontinence Sexual Function Questionnaire (PISQ)
Prolapse and Incontinence Sexual Function Questionnaire short form (PISQ-12)

Gonzalo HAGERMAN
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Professional Experience

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President Sandra Sucar Foundation
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Counselor, Mexican Board of Specialists in Diseases of the Colon and Rectum
Co-Director, Pelvic Floor Dysfunction Center
President of the 3rd Latin-American Coloproctology Conference, Aguascalientes, Mexico, 2016
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Past treasurer, Mexican Board of Specialists in Diseases of the Colon and Rectum
Chairman of the Scientific Committee 2011-2013, Mexican College of Specialists in Coloproctology
Honorary foreign membership Argentina Society of Coloproctology.
Honorary membership Chilean Society of Coloproctology.
Honorary membership Paraguayan Society of Coloproctology.

Room 3

[Chemotherapy Study Group] Recent Updates of Intraperitoneal Chemotherapy

Chairs

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Sung Chul LEE
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Education

2004-2010	M.D. degree from Dankook University College of Medicine, Choenan, Korea
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2020-2022	Ph.D. degree from Dankook University, Graduate School, Cheonan, Korea

Professional Experience

2010-2011	Rotating Internship in Dankook University Hospital
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2018-2020	Fellowship in Colorectal department of Surgery Samsung Medical Center
2020-2021	Clinical assistant professor in Colorectal department of Surgery Dankook University Hospital
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Current controversies of hyperthermic intraperitoneal chemotherapy (HIPEC)

Sung Chul LEE

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Peritoneal metastases (PM) are observed in approximately 8% of patients diagnosed with colorectal cancer, either synchronously or metachronously during follow-up. Peritoneal metastasis present unique challenge as this metastatic site was historically associated with short survival, severe symptoms, limited extension of survival, and a response rate not exceeding 30% after systemic chemotherapy. However, controversy over the treatment of peritoneal metastases is still ongoing. Since it is a systemic disease, research is still ongoing on whether chemotherapy should be given priority or whether it should be considered a local metastasis and proceed with local treatment. Traditionally, peritoneal metastases are considered terminal cancer, and palliative chemotherapy is the standard.

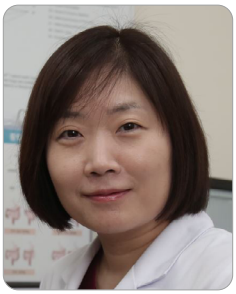
In cases where metastasis occurs to the peritoneum from high-grade appendiceal and colorectal tumors, there is generally a higher likelihood of metastasis to the liver and other distant organs, and such cases are classified as PM.

Over the past 30 years, international research and clinical experience have established that cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) are significant treatment options for patients with peritoneal metastases from colorectal and appendiceal tumors. This treatment provides substantial disease control and long-term survival possibilities that were previously challenging with conventional treatments. Furthermore, the proliferation of HIPEC centers and ongoing prospective clinical trials contribute to improving and standardizing the technical approach and criteria for patient selection for HIPEC. This progress represents an important step in enhancing treatment outcomes for patients with peritoneal metastatic cancer.

Randomized studies examining the effect of CRS and HIPEC for colorectal peritoneal metastasis (CRPM) remain scarce, with retrospective studies dominating the available literature. Dutch study conducted between 1998 and 2001, 105patients were randomized. Systemic chemotherapy with 5-FU and leucovorin (n=51) VS CRS and HIPEC involving MMC (n=54). Significantly longer Disease-specific survival of 22.2 months (p=0.028) (vs chemo. 12.6mo). Complete cytoreduction had significantly improved survival.

CRS HIPEC surgery is a complex surgery with a morbidity of close to 30% and a considerable mortality, so preoperative preparation and consent are important. Because long-time surgery and the resection of various organs are required, it is advantageous to take a multidisciplinary approach and maintain sufficient manpower. And the CRS HIPEC training and mentoring system is needed for the future.

This study aims to investigate issues related to HIPEC, such as drug selection, perfusion drugs, concentration, and time. Therefore, we aim to find out what studies and issues are currently related to HIPEC and what conditions exist for optimal HIPEC.



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Education

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Best drugs for Intraperitoneal chemotherapy

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The primary concept of intraperitoneal (IP) chemotherapy is that tumor tissues are directly exposed to a high concentration of anticancer agents in the peritoneal cavity and absorb them in accordance with the principles of passive diffusion and recirculation into the tumor core through the tumor microcirculation. The fundamental goal of IP chemotherapy is to maximize drug delivery into the peritoneal tumor cells and to minimize systemic circulation, which is related to systemic toxicities of chemotherapeutic agents. Thus, the ideal condition for hyperthermic intraperitoneal chemotherapy (HIPEC) is a prolonged stay of intraperitoneal drugs, slow clearance of drugs into plasma, and maintained hyperthermia to achieve the increased efficacy of chemotherapeutic agents in the tumor cells of peritoneum. Among them, proper selection of proper chemotherapeutic agents for IP chemotherapy is crucial to enhance the efficacy and to ensure oncologic benefits.

Oxaliplatin, a third-generation platinum compound containi ng diamino-cyclohexane and oxalate ligands, is commonly used to treat gastrointestinal tract malignancies because it prevents tumor progression via DNA adduction in tumor cells. More specifically, it is used as a chemotherapeutic drug in HIPEC against colorectal cancer compounded by peritoneal carcinomatosis. However, because the oxalate ligand of oxaliplatin is easily substituted by chloride or bicarbonate ions, mixing oxaliplatin into non-chloride-containing fluids rather than chloride- containing fluids has been recommended. However, the hypo-osmolarity and low pH of 5% dextrose solution used for oxaliplatin-based HIPEC causes complications such as severe electrolyte imbalance, tissue edema, and intraperitoneal hemorrhage. In addition, hyperglycemia caused by dextrose in the carrier solution increases the risk for peritoneal structure disruption and transforming growth factor-beta 1 (TGF-β1) generation. Furthermore, the results of the PRODIGE-7 trial indicated that using 5% dextrose as the carrier solution in oxaliplatin-based HIPEC did not confer any survival benefits to patients who underwent cytoreductive surgery (CRS) with oxaliplatin-based HIPEC, but only increased the grade C3 adverse events seen in these patients compared with those who underwent surgery without oxaliplatin-based HIPEC.

Historically, mitomycin-C (MMC) and oxaliplatin were widely used for HIPEC to treat colorectal cancer. An oxaliplatin-based regimen has been generally used as the standard regimen for HIPEC, although it has been recently switched to an MMC-based HIPEC in Europe based on the results of the French PRODIGE-7 trial. Thus, MM C is now the most used chemotherapeutic in HIPEC for colorectal cancer. MMC is an antitumor antibiotic that inhibits DNA synthesis. It has a molecular weight of 334 Da, is water soluble, and has a heat-synergetic effect. MMC has a relatively longer half-life and higher peritoneal-plasma area under the curve (AUC) than oxaliplatin, thus making it a proper HIPEC chemotherapeutic agent to treat colorectal cancer patients. The randomized controlled trial by Verwaal et al. used MMC for HIPEC and reported better survival benefits than those with systemic chemotherapy in colorectal

cancer patients with peritoneal metastasis. However, despite these benefits, MMC has adverse effects of delayed myelosuppression and nephrotoxicity.

In the treatment of colorectal cancer patients with peritoneal metastases, mitomycin-C and oxaliplatin had been used widely. However, after the results of PRODIGE-7 trial showed no survival benefit in the oxaliplatin-based HIPEC, most HIPEC centers has preferred to select mitomycin-C instead of oxaliplatin. However, chemotherapeutic agents for HIPEC have limitations of the use of old-fashioned drugs and low efficacy of chemotherapy compared with modern targeted chemotherapeutic agents. Therefore, it is needed to develop new drugs, which are adequate for the characteristics of IP chemotherapy and proper to increase the efficacy of drug absorption.

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Kyungpook National University, Korea

Education

2005 M.D. Kyungpook National University, School of Medicine, Daegu, Korea
2008 M.S. Kyungpook National University, Postgraduate School, Daegu, Korea
2015 Ph.D. Cand. Yeungnam University, Postgraduate School, Daegu, Korea

Professional Experience

2013-2017 Assistant Professor, Department of Surgery, School of Medicine, Kyungpook National University
2018-Present Associate Professor, Department of Surgery, School of Medicine, Kyungpook National University

Woo Ram KIM

Gangnam Severance Hospital, Korea

Education

2005	M.D. / Master Degree, Yonsei University College of Medicine
2015-2022	Ph.D. / Doctoral Degree, Yonsei University College of Medicine

Professional Experience

2016-2022	CHA University, Bundang CHA Hospital, Assistant Professor
2022-2023	CHA University, Bundang CHA Hospital, Associated Professor
2023-	Yonsei University, Gangnam Severance Hospital, Clinical associate professor

Standardization of cytoreductive surgery and Hyperthermic intra-peritoneal chemotherapy (HIPEC)

Woo Ram KIM

Gangnam Severance Hospital, Korea

According to the National Cancer Information Center (2021), colorectal cancer is the second most common cancer in South Korea after thyroid cancer, with an incidence rate of 32,751 per 100,000 people. Among patients diagnosed with colorectal cancer, about 10-15% are found to have peritoneal metastasis. Most of these patients only receive palliative chemotherapy, with an average survival time of 16-18 months.

Recent randomized controlled trials (RCTs) regarding oxaliplatin-based HIPEC have failed to demonstrate its effectiveness in treating peritoneal metastasis from colorectal cancer. However, specialized centers still report good outcomes with mitomycin-based HIPEC for selected patients.

Therefore, there is a need for standardization regarding CRS/HIPEC, as different centers have varying criteria for patient selection and the application of HIPEC. When discussing the standardization of CRS/HIPEC, the following factors must be considered; patient selection, strategies of perioperative chemotherapy, the procedure of CRS, and the procedure of HIPEC.

In patient selection, various factors need to be considered, including histopathology, CT-PCI (Peritoneal Cancer Index), intraoperative PCI, and CCR (completeness of cytoreduction) status. Regarding perioperative chemotherapy, RCTs are currently ongoing. While many reports suggest that adjuvant chemotherapy improves outcomes, neoadjuvant chemotherapy is still debatable. As a result, there are significant differences in the guidelines of Switzerland (2019), Canada (2020), and PSOGI (2020) regarding patient selection and the application of neoadjuvant chemotherapy and HIPEC.

The CRS procedure is the most crucial aspect of treating peritoneal metastasis from colorectal cancer, but there is currently no formal education or protocols in South Korea regarding this technique. Just as Dr. Heald's TME (Total Mesorectal Excision) technique became the standard for rectal cancer surgery, there is an urgent need for a program in South Korea to teach the six peritonectomy procedures proposed by Dr. Sugarbaker in 1995. The surgical steps proposed by Elias et al. in 2016 to enhance the completeness of CRS are also worth considering.

The HIPEC procedure also requires standardization in terms of the chemotherapeutic agent, temperature, duration, and perfusion technique. Unlike other countries, mitomycin is the only agent available in South Korea for use in colorectal cancer with peritoneal metastasis. However, according to data from the KOPEM study group, the dosage of mitomycin varies across the four major institutions in the country. Additionally, both open and closed perfusion techniques are being used.

To establish national guidelines and conduct multicenter studies on peritoneal metastasis from colorectal cancer in South Korea, there is a need to standardize everything from patient selection to the procedural techniques. The KOPEM study group is expected to play a crucial role in this standardization effort.

Dae Hee PYO
The Catholic University of Korea, Korea

Education

2011	Bachelor of Medicine, Sungkyunkwan University School of Medicine
2018	Master of Medicine, Sungkyunkwan University School of Medicine
2023	Doctor of Medicine, Sungkyunkwan University School of Medicine

Professional Experience

2011-2012	Intern, Samsung Medical Center
2012-2016	Resident, Samsung Medical Center
2019-2023	Clinical Fellow, Samsung Medical Center
2023-2024	Clinical Assistant Professor, Samsung Medical Center
2024-Present	Clinical Assistant Professor, Eunpyeong St. Mary's Hospital

Immunotherapy for peritoneal metastases

Dae Hee PYO

The Catholic University of Korea, Korea

Recent advancements in peritoneal carcinomatosis (PC) treatment have shown promising results. While the standard approach typically involves a combination of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC), immunotherapy has emerged as a potential alternative, generating considerable interest in the medical community. One notable development in this field is the European approval of catumaxomab, a trifunctional antibody used in intraperitoneal (IP) immunotherapy. This treatment targets EpCAM to reduce malignant ascites, exemplifying how IP immunotherapy aims to overcome immunological tolerance in peritoneal diseases. Various strategies are being explored to enhance T-cell responses and develop vaccines against tumor-associated antigens. Among the most promising approaches for PC treatment are CAR-T cells, vaccine-based therapies, dendritic cells (DCs) combined with pro-inflammatory cytokines and natural killer cells, adoptive cell transfer, and immune checkpoint inhibitors. Research has shown that IP administration of CAR-T cells can effectively suppress carcinoembryonic antigen-expressing tumors. This effect is further amplified when combined with anti-PD-L1 or anti-Gr1 treatments. In the case of folate receptor cancers, CAR-T cells coupled with CD137 co-stimulatory signaling have demonstrated improved T-cell navigation and survival within the body.

These advancements in immunotherapy offer new hope for PC patients and pave the way for further research into more effective and targeted treatments.

Room 4

[Microbiome Study Group]
Germs in Our Gut

Chairs

Seong Kyu BAEK

Keimyung University, Korea

Mauricio Ernesto Santamaria VALLE

Hospital Nacional Zacamil, El Salvador

Sung Uk BAE
Keimyung University, Korea

Education

1998-2004 Yeung Nam University College of Medicine (M.D.)
2007-2009 Graduate school of Eulji University College of Medicine (M.S.)
2012-2020 Graduate school of Yonesi University (Ph.D.)

Professional Experience

2005-2008 General Surgery Residency, Eulji university hospital (Board of Surgery)
2009-2011 Military Service as a KOICA International Cooperation doctor in Cambodia
2012-2014 Colorectal Surgical fellowship, Severance hospital, Yonsei University, Seoul, Korea
2014- 2016 Clinical Assistant Professor, Department of Colorectal Surgery, Keimyung Univesity Dongsan Medical Center, Daegu, Korea
2017-2021 Assistant Professor, Department of Colorectal Surgery, Keimyung Univesity Dongsan Medical Center, Daegu, Korea
2023-2024 Overseas training at St. Mark's Hospital
2021- Associate Professor, Department of Colorectal Surgery, Keimyung Univesity Dongsan Medical Center, Daegu, Korea

Seong Joon KOH

Seoul National University Hospital, Korea

Education

2011-2013 Ph.D., College of Medicine Seoul National University, Seoul, Korea
2002-2003 M.S., College of Medicine Seoul National University, Seoul, Korea
1998-2002 M.D., College of Medicine Jeju National University, Jeju, Korea

Professional Experience

2002-2003 Medical Internship, Seoul National University Hospital
2003-2007 Residency in Internal Medicine, Seoul National University Hospital
2007-2010 Epidemiologic Intelligence Service Officer in Korean Center for Disease Control (Military Service)
2010-2012 Clinical & Research Fellow, Department of Internal Medicine and Liver Research Institute, Seoul National University College of Medicine
2012-2014 Clinical Assistant Professor, Department of Internal Medicine, Seoul National University Boramae Medical Center
2017-2017 Vising professor, Department of Gastroenterology and hepatology, Stanford University
2014-2020 Associate Professor, Department of Internal Medicine, Boramae Medical Center, Seoul National University College of Medicine
2020-Present Associate Professor, Department of Internal Medicine, Seoul National University Hospital, Seoul National University College of Medicine

Inflammatory bowel disease related gut microbiome

Seong Joon KOH

Seoul National University Hospital, Korea

Inflammatory bowel disease (IBD), including Crohn's disease (CD) and ulcerative colitis (UC), is a chronic inflammatory disorder of the gastrointestinal (GI) tract. IBD has a significant impact on a patient's quality of life and requires lifelong management. Furthermore, the health and economic burden of IBD is growing due to the increasing prevalence and use of novel biological agents Therefore, the growing importance of preventing IBD emphasizes the need for a thorough understanding of its risk factors. The mechanisms underlying the development and pathophysiology of IBD are not fully understood. However, complex mechanisms between the host genetic factors and microbial factors are involved. Substantial progress in the pathogenesis of IBD has been achieved, which leads to the development of new therapeutic targets for IBD. The incidence of IBD has rapidly increased in Korea and worldwide. In addition, the medical cost of IBD management has been rapidly growing due to the use of biological and small molecular agents. However, no agent induces endoscopic remission up to 50% in patients with IBD, which is associated with the lack of knowledge regarding the precise mechanism of IBD.

The microbiome is one of the key players in IBD pathogenesis. We can use fecal microbiota transplantation to treat UC, suggesting that microbiome-based treatment can be developed. However, there are no available microbiome-based therapeutics in IBD fields. Korean government launched the project for the development of microbiome-based therapeutics in immune-mediated inflammatory disorders including IBD. In this project, we collect human samples from normal control, high-risk populations for IBD, and patients with IBD. Multiomics data using microbiome, metabolome, proteome, and single-cell technologies will be produced. Based on the multiomics mechanistic analysis, we will develop therapeutic targets for IBD. Finally, in vivo studies will perform to confirm the anti-inflammatory efficacy using newly developed IBD animal models. This project will highlight the precise host, immune, and microbiome interaction in IBD, which provides effective therapeutic candidates for the treatment of IBD.

Seungjae ROH
Konyang University Hospital, Korea

Education

2009-2010 Intern, Konyang University Hospital, Daejeon, Korea
2010-2014 Resident, Department of Surgery, Konyang University Hospital, Daejeon, Korea
2014-2017 Korean Military Medical Officer
2017-2018 Fellowship, Department of Colorectal Surgery, Konyang University Hospital, Daejeon, Korea.
2018-2020 Fellowship, Canter for Colorectal Cancer, Research Institute and Hospital, National Cancer Canter, Goyang-si, Gyeonggi-do, Korea

Professional Experience

2020-2021 Clinical assistant professor, Division of colorectal surgery, Department of surgery, Konyang University Hospital, Daejeon, Korea
2021- Assistant professor, Division of colorectal surgery, Department of surgery, Konyang University Hospital, Daejeon, Korea

Hospital-based human microbiome project in Korea

Seungjae ROH

Konyang University Hospital, Korea

The human body contains more than 10 times the number of microorganisms as the number of cells in the human body, and the majority of these microorganisms live in the GI tract, which is known to be closely related to human health. In 2008, the NIH launched the Human Microbiota Project (HMP), a five-year, $105 million program to characterize the microbiome in healthy and diseased individuals. The International Human Microbiome Consortium (IHMC) was organized in October 2008 to share data and conduct comparative analysis among multinational researchers in the United States and other countries. Until 2015, the IHMC held nine regular meetings to share research from each project and disseminate information through booklets and newsletters. Major countries have recognized the importance of the microbiome and have been supporting related research and development through large-scale budgets to establish key microbial genetic data since a decade ago. [U.S. HMP Project (`07~`16), European MetaHIT Project (`08~`12)]

It is time to switch to new medicine based on scientific evidence and discover new markets, but Korea has been focused on investing in the basic microbiome field. Microbiome is a highly valuable field that can be used as a key tool for healthcare, including personalized healthcare, pre-diagnosis and treatment of diseases by integrating individual genetic information, disease information, and lifestyle information. There is a growing need for verification and demand for therapeutics and treatment technologies in the microbiome field through clinical research, but Korea has been concentrating on basic research, which requires additional investment. In addition, there is a lack of sharing of patient information and clinical information closely related to infectious diseases. Due to the fragmented investment by companies to focus on product development for one or two specific diseases, there is a limit to spreading research networks. Therefore, there is a growing need for the government to build an infrastructure that enables human-based research and revitalize such research to solve problems such as intractable diseases. In addition, by establishing standard protocols unique to Korea and integrating them with individual genetic, disease, and life information, it is expected to be utilized as a key means of personalized healthcare, diagnosis, and treatment, and is seeking to establish a collaborative ecosystem through the establishment and activation of multidisciplinary research networks.

In response, the government secured a budget of 25.4 billion won for the hospital-based human microbiome R&D project under the Ministry of Health and Welfare from 2023 to 2027 to lay the foundation for data collection and expansion, lay the foundation for follow-up projects through performance exchange, and secure clinical evidence for new treatment technologies, Kyung Hee University Hospital, Chung-Ang University Hospital, Ajou University Hospital, and Kyungpook National University Hospital were selected as the main hospitals, respectively, and samples and data were collected from the hospitals to the Korea Centers for Disease Control and Prevention under the collaboration of the Ministry of Health and Welfare and the Korea Centers for Disease Control and Prevention, and the Korea Centers for Disease Control and Prevention presented standardized guidelines and integrated platform data. The Korean Society of Colporoctology also conducts microbiome research and exchanges the latest knowledge on microbiome, and shares the latest knowledge on the prevention and treatment of intestinal microorganisms and colorectal diseases through the Microbiome Research Committee.

Kristen RUMER
Mayo Clinic, Minnesota, USA

Professional Experience

Kristy Rumer M.D., Ph.D., F.A.C.S is a Colorectal Surgeon Scientist and Assistant Professor of Surgery at the Mayo Clinic in Rochester, Minnesota. She earned her MD/PhD at the University of Colorado before completing her general surgery residency at Stanford University. She completed her Colorectal surgery fellowship at Cleveland Clinic in Florida. In her clinical practice she treats the full spectrum of colorectal diseases. She is the Director of the High-Resolution Anoscopy Clinic at Mayo Clinic, Rochester. Additional areas of clinical focus are inflammatory bowel disease and surgical prehabilitation. Dr. Rumer runs a translational science lab focused on understanding immune-epithelial interactions perianal fistulizing Crohn's disease. Her work aims to improve treatments in inflammatory bowel disease. Dr. Rumer is an Exectuive Board Member of ISUCRS and co-editor of the society journal, World Journal of Colorectal Surgery.

Kil Yeon LEE

Kyung Hee University, Korea

Education

1986-1992 M.D. degree from Kyung Hee University College of Medicine, Seoul, Korea
1993-1995 Master degree from Kyung Hee University, Graduate School, Seoul, Korea
1995-2001 Ph.D. degree from Kyung Hee University, Graduate School, Seoul, Korea

Professional Experience

2012-Present Professor, Department of Surgery, Kyung Hee University Hospital
2018-Present Chief, Humanitas Cancer Center

Room 1

ISUCRS Presidential Lecture

Chair

Woo Yong LEE

Sungkyunkwan Universiy, Samsung Medical Center, Korea

Joseph W. NUNOO-MENSAH

King's College Hospital & Cleveland Clinic London, UK

Education

1997	Fellow of the Royal College of Surgeons of England [FRCS]
2001-2003	University of Cardiff Law School, Cardiff
2003	Master's degree in medical law [LLM]
2007	Intercollegiate Specialty Examination in General Surgery FRCS (Gen.Surg)
2008	Certification of Completion of Training (CCT)

Professional Experience

Mr. Joseph Nunoo-Mensah is a distinguished and highly accomplished colorectal surgeon at King's College Hospital & Cleveland Clinic London celebrated for his profound expertise in colorectal cancer, inflammatory bowel disease, pelvic floor disorders, and advanced proctology, including complex fistulae and haemorrhoids.

Mr. Nunoo-Mensah embarked on his medical journey with a solid foundation, completing his undergraduate medical training at Queen's Medical School, University of Nottingham, from September 1988 to July 1993. His dedication and passion for surgery led him to pursue postgraduate general surgical specialist training in North-West England (Manchester, UK) from July 1998 to July 2008.

Committed to excellence, Mr. Nunoo-Mensah further honed his surgical skills through advanced training in laparoscopic (minimally invasive) surgery at the prestigious Mayo Clinic in Arizona. He also completed advanced training in the treatment of complex colorectal diseases at the University of Southern California, all while earning a Master's degree in Legal Aspects of Medical Practice from Cardiff University.

In August 2008, Mr. Nunoo-Mensah joined King's College Hospital, where his leadership and vision have been instrumental. Since 2018, he has served as the head of the department of colorectal surgery, leading the colorectal cancer multidisciplinary team (MDT) and overseeing the anorectal physiology laboratory. His commitment to advancing colorectal care has made a significant impact on patient outcomes and the medical community.

Since August 2021, Mr. Nunoo-Mensah has also brought his expertise to the new Cleveland Clinic London, where he continues to innovate and excel as a colorectal surgeon. His leadership extends to his roles as Chairman of the Conflict-of-Interest Committee and a member of the Medical Executive Council at the clinic.

Mr. Nunoo-Mensah's dedication to the field is exemplified by his presidency of the International Society of University Colon and Rectal Surgeons (ISUCRS) from 2022-24. His previous roles as Director General from 2020-2022 and Secretary General from 2018-2020 highlight his unwavering commitment to advancing global colorectal surgery.

ISUCRS 2024 in conjunction with **iCRS by KSCP**

Poster Presentation

P1-01

Factors Associated with Colorectal Cancer in FIT Positive Colonoscopic Screening Patients in Lampang, Thailand

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[1] Lampang Regional Hospital

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Background

In Thailand, colorectal cancer is currently on the rise and ranks as the third most prevalent cancer in both genders. Multiple studies have demonstrated a correlation between various factors and the incidence of colorectal cancer. These factors include being over 50 years old, having a high body mass index, a family history of colorectal cancer among first-degree relatives, diabetes mellitus type 2, hypertension, and dyslipidemia.

Consequently, this study aims to investigate the specific factors contributing to the occurrence of colorectal cancer in the population of Lampang. Method: An etiognostic research cross-sectional study was conducted utilizing data extracted from medical records of individuals who underwent FIT-positive colorectal screening in Lampang Province from 2019 to 2020. The study aimed to identify factors associated with an increased risk of colorectal cancer in adults aged 50 years and older. Risk factors were analyzed through univariable and multivariable ordinal continuation-ratio logistic regression to examine their impact on the ordinal outcomes.

Result

Among the 672 FIT-positive patients screened from 2019 to 2020, only 291 underwent complete colonoscopy. Adenocarcinoma was detected in 6 patients (2.1%), while the study identified adenomatous polyps in 64 patients (22%). The analysis revealed that male gender is associated with a higher risk of colorectal cancer, with an odds ratio (OR) of 1.96 and a 95% confidence interval (CI) of (1.07-3.63), yielding a p-value of 0.031. Similarly, individuals aged over 60 years were found to have an elevated risk of colorectal cancer, with an OR of 2.01 and a 95% CI of (1.08-3.73), with a p-value of 0.026.

Conclusion

This study observed a colorectal cancer incidence of 2.1% among FIT-positive patients who underwent colonoscopic screening in Lampang Province from 2019 to 2020. The identified risk factors advocating a higher colorectal cancer risk include male gender and individuals aged 60 years and older.

keyword

Colorectal Cancer, FIT Positive Patients, Colonoscopy

P1-02

A Review of Bowel Preparation Practices of Surgeons for Elective Colorectal Surgery and Correlating with the Incidence of Surgical Site Infections in A Tertiary Hospital in Davao City

Marco Angelo Calimbas[1], Robert Bandolon[2], Romulo Ong-Abrantes[2]

[1] Davao Doctors Hospital, Philippines

[2] Department Of General Surgery, Davao Doctors Hospital, Philippines

Aims

This study aims to determine the bowel preparation practices of different surgeons doing elective colon and rectal procedures and correlate it with incidence of surgical site infection (SSI) in a tertiary hospital in Davao city.

Methods

This retrospective study identified 137 patients ages 18 years and above who have undergone colorectal resections in the institution from January 1, 2018 – June 30, 2022 in Davao Doctors Hospital. Of these, 50 patients were excluded due to undergoing emergency colorectal resection and a total of 87 patients who underwent elective colon and rectal surgery was included in this study.

Results

Among the 87 patients, majority of them underwent combined mechanical bowel preparation with oral antibiotics (MBP+OA) (52%) followed by mechanical bowel preparation (MBP) only (47%) and only 1 patient had no bowel preparation for elective surgery. A total of 4 out of 87 patients (5%) developed SSI, 2 patients for the MBP only group, and 1 patient each for MBP+OA and no bowel preparation group.

Conclusion

The study concluded that MBP+OA group has an overall better advantage in decreasing the risk of any type of SSI compared with MBP alone by 38% and 31% respectively. This highlights the recommendation of the recent 2019 bowel preparation guidelines of the American Society of Colorectal Surgeons (ASCRS) to routinely use MBP+OA when doing bowel preparations for elective colorectal surgery to further decrease the risk of developing SSI and optimize postoperative healthcare quality.

keyword

Surgical site infection, Colorectal surgery, Bowel preparation, MBP, MBP+OA

P1-03

Total neoadjuvant therapy and organ preservation versus surgery for rectal cancer prospective, non-inferiority, randomized, controlled trial (STart).

Audrius Dulskas[1], Ernestas Sileika[2], Juras Kisonas[2], Edita Baltruskeviciene[3], Audrius Dulskas[4], Tomas Poskus[5]

[1] National Cancer Institute, Lithuania

[2] Radiation Oncology Department, National Cancer Institute, Lithuania

[3] Medical Oncology Department, National Cancer Institute, Lithuania

[4] General And Abdominal Surgery And Oncology Department, National Cancer Institute, Lithuania

[5] Institute Of Clinical Medicine, Vilnius University, Lithuania

Background

The study hypothesis is that around 50% of rectal cancer patients can preserve their rectum by adopting a watch-and-wait strategy after achieving complete or near complete clinical response (cCR/ncCR) following total neoadjuvant therapy (TNT).

Objectives and research questions

Our objective is to determine whether the number of complications, quality of life, and survival of rectal cancer patients with a cCR/ncCR after TNT and rectal preservation with a watch-and-wait approach is not inferior to those of patients who underwent surgery as initial treatment. We are planning to identify potential prognostic/predictive markers.

Methods

o Design: In this prospective, non-inferiority, randomized, controlled trial we will include patients with cT1N1, T2-T3 N0-1 rectal cancer, no involvement of mesorectal fascia (MRF), no extramural vascular invasion (EMVI). The experimental group will consist of patients undergoing TNT - chemoradiotherapy treatment with consolidation chemotherapy. If a cCR/ncCR is achieved, patients will be followed by watch-and-wait strategy - experimental non-operative approach. The control group will consist of patients undergoing surgical treatment first.

o Inclusion/exclusion criteria: Inclusion criteria: patients over 18 years of age who agreed to participate in the study and signed an informed consent form. ECOG score between 0 and 2. Confirmed rectal adenocarcinoma. Tumor up to 10 cm from the anus. The diagnosis was confirmed by pelvic magnetic resonance imaging and chest and abdominal computed tomography. cT1N1, T2-T3 N0-2, M0 rectal cancer, MRF ±, EMVI ±. Exclusion criteria: previous radiotherapy or chemotherapy. Patients who cannot undergo pelvic magnetic imaging; a history of malignancy within the last 5 years, except treatment for basal cell or squamous cell skin cancer or cervical cancer in situ. ECOG status ≥ 3. Evidence of distant metastases. Patients with uncontrolled therapeutic or psychiatric conditions. Infectious diseases requiring antibiotic treatment.

o Primary and secondary outcome parameters: We will evaluate the rate of complications and death, the incidence of low anterior resection syndrome, the quality of life of the patients, and the incidence of cCR/ncCR and complete pathological response (pCR) after TNT, as well as the R0 surgery rate. Secondary outcomes include the tumor regression rate according to Dworak, the rate of rectal preservation, the incidence of local regrowth when complete clinical response is achieved, the incidence of surgery after neoadjuvant therapy and salvage surgery, as well rates of local and distant recurrence. Additionally, biomarker studies will be conducted. Survival rates, including overall survival, disease-free survival, relapse-free survival, local relapse-free survival, metastasis – free survival, colostomy-free survival, as well as survival without rectum resection.

o Group size calculation: Sample calculations estimated that the incidence of low anterior resection syndrome in the control group would be approximately 70%, while the symptoms like to low anterior resection syndrome in the experimental group would be around 50%. With a type 1 risk of 5.0% and a type 2 risk of 20.0%, a unilateral test and a dropout rate estimated at 20.0%, we estimate that 92 and 92 patients would be necessary for control and experimental groups respectively.

o Time frame and funding: Participants will be enrolled in the study for the first two years (01/06/2024 - 01/06/2026) and will be followed up for three years after enrolling

keyword

Rectal cancer, Total neoadjuvant therapy, Organ preservation

P1-04

Initial clinical experience of robotic colorectal cancer surgery using da Vinci SP platform

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[1] Fujita Health University, Japan

[2] Gastrointestinal Surgery, Fujita Health University, Japan

[3] Advanced Robotic And Endoscopic Surgery, Fujita Health University, Japan

[4] Advanced Robotic And Endoscopic Surgery, Fujita Health University, Japan

Background

The use of robotic surgery for colorectal cancer has become widespread recently, and the development of new robotic platform are remarkably progressing. Whether the safety and feasibility of robotic surgery using new robotic platform for colorectal cancer remains controversial. Therefore, we aimed to evaluate the short-term outcomes of colorectal cancer surgery with da Vinci SP, one of the new robotic platforms.

Methods

Between May 2023 and March 2024, 23 patients underwent robotic colorectal cancer surgery with da Vinci SP; their short-term outcomes were retrospectively evaluated.

Results

The median age was 71 years (range, 44-84 years), 7 of the 23 patients were males, and the median BMI was 21.6 (range, 14.3-32.4) kg/m2. Nine patients (39.1%) had a history of abdominal surgery. The number of patients with clinical stage I, II, III, and IV were 7, 5, 10, and 1, respectively. The procedure performed were 14 cases of RHC, 2 cases of LHC, 7 cases of AR, and cases LAR. The median length of skin incision was 40 (range, 30-50) mm. The median operative time and console time were 229 (range, 94-338) min and 181 (range, 52-322) min, respectively. The median blood loss was 6 (2-145) ml. As a postoperative complication, adhesive bowel obstruction was observed in only one patient (4.3%).

Conclusions

The colorectal cancer surgery using da Vinci SP was performed safely. In the further, we believe it is required to observe the long-term outcomes with da Vinci SP and to investigate its unique advantages for colorectal cancer surgery.

keyword

Colorectal cancer, Da vinci SP, Surgical outcome

P1-05

Study of clinical and molecular pathologic features of Early onset Colorectal Cancer with mismatch repair deficient and Lynch syndrome

Satoshi Shimamura[1], Kenji Fujiyoshi[2], Kahori Hisada[2], Hirona Shigyou[2], Maako Kikuchi[2], Takahiro Shigaki[2], Naohiro Yoshida[2], Kenichi Koshi[2], Takefumi Yoshida[2], Tomoya Sudo[2], Fumihiko Fujita[2]

[1] Kurume University, Japan

[2] Surgery, Kurume University, Japan

Background(Aims)

Early-onset colorectal cancer (EOCRC) is associated with a family history of CRC. Lynch syndrome (LS) is the most common hereditary CRC. LS-associated CRC shows mismatch repair deficiency (dMMR). Few studies have reported on the characteristics of EOCRC with dMMR. For the contribution of effective surveillance, we studied the clinical and molecular-pathological characteristics of EOCRC.

Methods

A total of 857 colorectal cancer surgery cases from 2017-2023 were included in the study. Clinical and molecular pathologic characteristics were compared among three groups: EOCRC (<50 years old) group=47, middle-aged onset CRC (MOCRC, 50-69 years old) group=357, and late onset CRC (LOCRC, >70 years old) group=473.

Results

EOCRC group was significantly associated with having a family history, than MOCRC (P=0.01) and LOCRC (P<0.01) groups. EOCRC (15%) group had a likely higher rate of dMMR than the MOCRC (8%, P=0.23) and LOCRC (12%, P=0.45) groups. Regarding immunohistochemistry pattern of EOCRC with dMMR, MSH2-MSH6 deficiency was the most common (67%), while, MLH1-PMS2 pattern were the most common in the MOCRC (39%) and LOCRC (80%). Through the following germline testing, 83% of the EOCRC group, 27% of the MOCRC group, and 10% of the LOCRC were diagnosed with LS respectively.

Conclusions

In our study, EOCRC group was associated with having family history and CRC with dMMR compared to MOCRC and LOCRC groups. MSH2-MSH6 deficiency pattern was more common in the EOCRC group, while MLH1-PMS2 deficiency pattern was more common in the MOCRC and LOCRC groups. Screening for LS based on MMR-immunohistochemistry pattern as well as interviewing family history are important for EOCRC and contributing to appropriate surveillance.

keyword

Early onset colorectal cancer, Lynch syndrome, Mismatch repair deficiency

P1-06

Left Sided Appendicitis in a Redundant Ascending Colon: A Case Report

Lovely Gay Pascual[1], Maria Cielo Ampuan[2], Kathrine Marie Montejo[2], Rodrigo De Mesa[2], Fae Therese Bernaldez-Toreja[2]

[1] Resident Physician, Philippines

[2] Surgery, Consultant, Philippines

Acute Appendicitis is an inflammation of the vermiform appendix which initially presents as an epigastric or periumbilical pain followed by migration of pain to the right lower quadrant as the appendix becomes more inflamed and the adjacent parietal peritoneum is irritated. Regardless of appendiceal tip position, appendicitis is a main consideration in a patient presenting with right lower quadrant pain.

Several practical scores have been defined to facilitate the prompt diagnosis of acute appendicitis, mainly based on the history and physical examination, accompanied by laboratory tests. Imaging studies including abdominal ultrasonography and Computed Tomography Scan is not necessary but can also be an adjunct in the diagnosis.

This study highlights the rarity of left-sided appendicitis in association with a redundant ascending colon and mobile cecum in a 47-year old male presenting with a one day history of crampy epigastric pain radiating to the left lower quadrant pain, 8/10 in severity, associated with chills and vomiting of previously ingested food. Patient was initially considered to have acute Diverticulitis but on further work up, imaging revealed a left-sided appendicitis. Of the 95 known cases of left sided appendicitis worldwide, there is only 1 prior known case associated with a redundant ascending colon. The study emphasizes the importance of considering diverse anatomical variations and judicious use of imaging in the clinical assessment of abdominal pain to ensure timely surgical management and enhanced patient outcomes.

keyword

Appendicitis, Left sided, Redundant, Ascending colon

P1-07

Examination of risk factors affecting oncological outcomes after radical surgery in patients with rectal cancer who received standard neoadjuvant therapy

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Aims

Rectum cancer is known as the 4th most common type of cancer in the world. It is known that neoadjuvant radiotherapy and chemotherapy have a positive effect on survival and recurrence rates in rectal cancers. However, despite this treatment, survival and recurrence rates are still not at the desired level in a group of patients. This study aims to determine the factors affecting recurrence and survival in patients with rectal cancer who received standard neoadjuvant treatment.

Material and Methods

Our study examined patients with rectal cancer who were operated on between January 2012 and December 2020 at the General Surgery Clinic of Kartal Dr Lütfi Kırdar City Hospital and received standard neoadjuvant treatment. Male and female patients between the ages of 18 and 90, who underwent surgery for rectal cancer, received standard neoadjuvant treatment, and did not have distant metastasis, were included in the study. Risk factors in patients were examined in 3 separate groups: mortality, local recurrence and distant metastasis.

Results

Incomplete mesorectum excision was found to be an independent factor increasing local recurrence ($p<0.05$). Tumor diameter, preoperative CEA height, tumor differentiation, T stage of the tumor, N stage of the tumor, incomplete mesorectum excision, perineural invasion, vascular invasion, KRAS mutation, degree of response to neoadjuvant treatment were seen as factors affecting distant metastasis ($p<0.05$).

Conclusion

In our study, it has been shown that mesorectum excision is incomplete, is an independent factor affecting local recurrence, and is also effective on distant metastasis, independent of local recurrence. There is no study in the literature showing the relationship between preoperative CEA measurement and post-treatment distant metastasis. In our study, it was found that the effect of preoperative CEA value on distant metastasis was significant. We believe that different oncological treatments may improve outcomes in patients with high preoperative CEA.

keyword

Rectal Cancer , Risk Factors, CEA, TME , Oncological outcomes

P1-08

Prediction of Early Risk of Colorectal Cancer Based on Lifestyle Factors Via Machine Learning Models

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Objective

The objective of this work was to build a low-cost, non-invasive, quick, and high-precision diagnostic model by employing six machine learning (ML) algorithms to classify patients into groups with high or low risk of getting colorectal cancer by examining individual lifestyle characteristics.

Method

From the colorectal cancer database collected in India, 1300 people's records were used in this retrospective analysis. Randomly chosen ratios of 0.7:0.3 were used to divide the data into training and test sets. Before and after utilising the relief feature selection method, six ML techniques MLP, SVM, linear kernel, SVM (RBF kernel), KNN, RF and XGBoost—were trained to create prognostic models. Test split and cross-validation were used to determine the metrics produced from the confusion matrix in order to assess the performance.

Result

This study identified 11 key risk factors for colorectal cancer, including infection, high salt intake, chronic atrophic colitis, fruit consumption, stomach or duodenal ulcers, weight loss, high-fat food consumption, educational level, smoking, stress level, and weight. The XGBoost classifier produced accuracy, sensitivity, specificity, and accuracy scores of 82.3%, 84.5%, 86.7%, 83.2%, and 82.1% when the chosen factors were incorporated into the model, according to the results. When all features were supplied into the classifiers, the KNN classifier for K = 7 produced results with a mean accuracy of 65.99%, a mean sensitivity of 65%, a mean specificity of 71.3%, an AUC of 65.7%, and a mean H-score of 66.15%.The XGBoost classifier's AUC and classification report; this classifier was chosen as the best one for colorectal cancer prediction.

Conclusion

The findings, starting with basic patient baseline data, ML approaches have potential to begin the prescreening of colorectal cancer and identify high-risk people who should move forward with invasive exams. The number of cases that require endoscopic surveillance could be significantly reduced with the help of our model

keyword

Colorectal cancer, Machine Learning

P1-09

Solid lipid nanoparticles of ursolic acid mitigates azoxymethane/dextran sodium sulfate induced colorectal cancer via improving Wnt/β-catenin signalling pathway and intestinal microbiota

Deepika Singh

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Background

There is still much to learn about the etiology and management of colorectal cancer (CRC), particularly about the potential advantages of traditional Chinese medicine (TCM) for delaying the disease's progression. The purpose of this study was to examine the efficacy and mode of action Solid lipid nanoparticles of ursolic acid (SLN-UC) mitigates azoxymethane/dextran sodium sulfate induced colorectal cancer via improving Wnt/β-catenin signalling pathway and intestinal microbiota.

Procedures

To see if SLN-UC could help with CRC, we used azoxymethane/dextran sodium sulfate (AOM/DSS) to make CRC models in animals and gave them high, medium, or low doses of SLN-UC or mesalazine (MS) for nine weeks. The best SLN-UC dose group was then put through metagenomic and RNA sequencing (RNA-seq) procedures to look into the differences in the types of bacteria and genes that were present in the control, model, and SLN-UC groups. Ultimately, WB, qRT-PCR, immunohistochemistry, and TUNEL labeling were used to confirm the mechanism of action.

Result

The best results were shown at large dosages of SLN-UC, which prevented the advancement of CRC. By reducing the quantity of pathogenic bacteria and elevating the quantity of helpful bacteria, SLN-UC controlled the composition and activity of the gut flora. The Wnt/β-catenin pathway and the cell cycle were the primary connections between the differentially expressed genes. SLN-UC was found to restrict the Wnt/β-catenin pathway, the epithelial–mesenchymal transition (EMT), prevent aberrant cell proliferation, and encourage intestinal epithelial cell apoptosis, according to molecular biology studies.

In conclusion

CRC was prevented from progressing by SLN-UC, which reduced aberrant intestinal epithelial cell proliferation and encouraged apoptosis. By altering the intestinal microbiota and interfering with the Wnt/β-catenin pathway and the EMT, this suppression was achieved.

keyword

Ursolic acid, Apoptosis, Solid lipid nanoparticals, Wnt/β-Catenin

P1-10

Leiomyosarcoma - a rare primary tumor in the sigmoid colon: A Case Report

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This is a case of a 51-year-old female with a three-month history of abdominal pain, hematochezia, decreased stool calibre, and undocumented weight loss; with generally unremarkable physical examination findings. The patient underwent a computed tomography (CT) scan as well as colonoscopy, showing a mass in the sigmoid. The patient underwent elective surgical resection and histopathologic and immunohistochemical (IHC) analysis of the tumor revealed a primary leiomyosarcoma of the sigmoid. Primary sigmoid leiomyosarcoma is an exceedingly rare disease representing 0.1% of all colon malignancies disease and the diagnosis can be definitively established with histopathology and immunohistochemical staining. Due to the limited available data on LMS, the exact pathogenesis and associated risk factors are not well-defined. Leiomyosarcomas are highly aggressive tumors that are believed to have a high local recurrence rate with a high potential for distant metastasis via the hematogenous route and associated with a poor prognosis. It is important to definitively identify a colorectal tumor, as adjuvant therapy and consequent prognosis are dependent on histopathologic and immunohistochemical diagnosis. The treatment for LMS is not yet standardized due to limited data but surgical resection remains to be the foremost treatment in the management of these patients, with the goal of achieving complete resection. Colonic leiomyosarcomas are generally poorly responsive to conventional chemotherapy while radiotherapy hasn't also shown a good treatment effect to this disease. Further studies to better describe the pathogenesis, associated risk factors, management, and prognosis of patients with primary colonic leiomyosarcomas are needed.

keyword

Leiomyosarcoma, Sigmoid

P1-11

Evaluating the Efficacy of Rectus Sheath Catheters for Local Anaesthetic Infiltration in General Surgical and Colorectal Patients Undergoing Abdominal Surgery: A Single-Center, Single-Surgeon Retrospective Analysis

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Background

Effective postoperative pain management is crucial for recovery in abdominal surgery patients. This retrospective study examines the use of rectus sheath catheters for local anaesthetic infiltration in this context, aiming to enhance pain control strategies based on data from a single surgical center and surgeon over 3 years.

Methodology

Data from 40 patients undergoing abdominal surgery (5 emergency laparotomies, 35 elective colorectal resections) were analyzed. Procedures were performed by a single surgeon to ensure consistency. Variables assessed included patient-controlled analgesia (PCA) use, opioid prescr!ptions, time to flatus passage, time to open bowels, and average pain scores from postoperative day 1 to day 5.

Findings

The study reveals a significant reduction in PCA use among patients managed with rectus sheath catheters, with only 50% requiring PCA. The mean duration of PCA use was 2.1 days, underscoring the catheters' efficacy in postoperative pain control. Additionally, there was a notable decrease in opioid consumption, with 39 patients receiving regular opiates for an average of 2.9 days and 35 receiving as-needed opiates for 2.7 days. Average pain scores decreased from 3.54 on day 1 to 1.68 by day 5, highlighting the catheters' role in pain management and recovery. Recovery indicators included a mean time of 3 days for flatus passage and 4 days for bowel opening.

Conclusion

This study underscores the benefits of rectus sheath catheters in reducing PCA use, opioid consumption, and average pain scores postoperatively. The findings support the integration of these catheters into abdominal surgery pain management protocols to improve patient outcomes and recovery. Further exploration and implementation of this approach are recommended to optimize personalized analgesic strategies and enhance patient care.

keyword

Rectus sheath catheter, Analgesia, Postoperative pain management, Laparotomy, Local anesthetic infiltration

P1-12

Exploring Phytosterols: Impact on Fecal Characteristics and Gut Microbiota in Constipated Middle-Aged Women

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Introduction

Phytosterols (called plant sterol and stanol esters) are found in plant cell membranes. Phytosterols are similar in structure to cholesterol in the human body and block cholesterol from being absorbed. Sugar rich diet induces inflammation and insulin resistance mainly through gut microbiota alteration. The aim of this study was to investigate effects of phytosterols on bowel movements (stool form and frequency), plasma bile acids, quality of life, and gut microbiota of constipated middle-aged women.

Methods

A randomized, double-blind, placebo-controlled, and parallel trial was performed on 104 constipated middle-aged women (41.9 ± 6.3 years old) with minimum 4 bowel movements every week, wherein above 50% of their stool was between the Bristol stool scale (BSS) value of 5 and 6. Volunteers were randomized to treatment with placebo. Treatment consisted of 4 weeks supplementation with 25 g/d phytosterols (fiber group) or maltodextrin (placebo group). Abdominal discomfort, flatulence, stool consistency, and bowel movements were evaluated by a recorded daily questionnaire and a weekly interview. Changes in fecal bacterial population and short chain fatty acids were assessed by real-time PCR and gas chromatography, respectively.

Results

Intake of the phytosterols for one month significantly improved stool form, evaluated using BSS, and had no effects on stool frequency. BSS was significantly normalized in the group consuming the phytosterols compared with the placebo. Comprehensive fecal microbiome analysis by the 16S rRNA-sequence method detected significant changes in the ratio of some bacteria, such as an increase of Bifidobacterium in the phytosterols group. There were no changes in fecal short chain fatty acid profile.

Conclusion

Our results suggest that intake of phytosterols improves human stool form via regulating intestinal microbiota. A higher consumption of phytosterols allows a substantial increase in well-tolerated dietary fiber, which may in turn improve food-related behavior. Moreover, it leads to beneficial modifications of the

keyword

Gut microbiota , Phytosterols , Constipated , Bowel movements, women

P1-13

Comparative Analysis of Immunohistochemical Features in Early-Onset and Late-Onset Colorectal Cancer

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Background

Globally, early-onset colorectal cancer (EOCRC) is rapidly increasing. Patients with EOCRC often display more aggressive features and are frequently diagnosed at advanced stages. Despite these characteristics, it remains controversial whether immunohistochemical features can distinctly differentiate EOCRC from late-onset colorectal cancer (LOCRC). Therefore, this study aims to analyze twelve years of data from a single institution to investigate the immunohistochemical characteristics of EOCRC patients.

Method

This retrospective, single-center study analyzed data from 2,172 patients who underwent colorectal cancer surgery between 2011 and 2022. Patients were classified into two groups based on age: 246 patients 50 years or younger as EOCRC and 1,926 over 50 as LOCRC. We compared demographics, pathological results, and immunohistochemical profile.

Results

The EOCRC group showed a significantly higher proportion of stage IV patients and a higher rate of rectal cancers. No significant differences were found in cell differentiation. Immunohistochemistry did not reveal any distinct markers to clearly differentiate EOCRC from LOCRC, although only MSH2 positivity was higher in LOCRC.

Conclusion

Our study confirmed a higher prevalence of advanced disease in EOCRC, consistent with prior research. However, immunohistochemical profiles did not provide clear distinctions between EOCRC and LOCRC, suggesting that most EOCRC cases appear sporadic, and current treatment strategies can be applied. The high rate of stage IV disease in EOCRC underscores the need for earlier screening. Further research is necessary to explore potential pathways associated with the increased prevalence of stage IV disease in EOCRC patients.

keyword

EOCRC, Immunohistochemistry

P1-14

Beneficial effect of Surya Namaskar Yoga therapy with Aloe-Vera juice in irritable bowel syndrome patients

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Background

Irritable bowel syndrome (IBS) is the most prevalent functional gastrointestinal disorder worldwide. Yoga activity in relation to IBS has been investigated in few studies and data in this regard are conflicting. The aim of the present study was to determine the impact of Surya Namaskar yoga therapy with Aloe-Vera juice on Irritable bowel syndrome patients in west Delhi metro population.

Methods

The study involved 130 participants, of which 65 were involved and 65 were not involved (control group) in exercise. Using a cross-sectional design, which includes age, family history of IBS, exercise status and waist circumference, fasting glucose were recorded. IBS patients were treated for one hour for Surya Namaskar yoga therapy (time duration of 06:00- 07:00 A.M) early morning with 100 ml Aloe vera juice drink after exercise for one month. In both groups, the level of blood glucose was measured at arrival after they had standard brunch, a total of 250 Kcal. In both groups, the level of blood glucose was measured after 120 minutes. Using a validated self-administered modified Rome III questionnaire, functional gastrointestinal disorders including irritable bowel syndrome was assessed.

Results

After one month of treatment there were significant changes in glucose, insulin and glycosylated haemoglobin levels, markedly improved symptoms, such as burning, pain, early satiation, belching and nausea, as compared to normal levels with changes in life style. We found that Surya Namaskar yoga therapy with Aloe-Vera juice significantly improved symptoms, like vomiting, and nausea, except for pain, stools quality also changed to normal as compared to control subjects. This process leads to a balanced energy level which in turn leads to a healthy life.

Conclusions

IBS can be controlled and regulate by treating patients with Surya Namaskar yoga therapy and Aloe-Vera juice in patients without using any harmful drugs. Our study indicated the

keyword

Surya Namaskar yoga therapy, Aloe-Vera juice, Irritable bowel syndrome

P1-15

Protective Role of α-Linolenic acid Pre- Treatment On N-Nitrosodiethylamine Induced Oxidative Stress In Male Albino Rats

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Background/Aims

α-Linolenic acid (ALA) is widely employed for gastrointestinal complaints such as dyspepsia, flatulence, diarrhea, and vomiting. This study was planned to determine whether pre-treatment with ALA to N-nitrosodiethylamine (NDEA), induced rats provides protection against oxidative stress in kidney and liver caused by the carcinogen.

Methods

A single necrogenic dose of NDEA (200mg/kg body weight) was administered i.p. to the male Wistar rats with or without ALA (50 and 100 mg/kg body weight, i.p., intragastrically by gavage for twice a week for 4 weeks) pre-treatment and the animals were sacrificed on days 7, 14 or 21 after the administration of NDEA.

Results

The result showed enhanced levels of hepatic lipid peroxidation (LPO), kidney ornithine decarboxylase (ODC), urea , creatinine and conjugated dienes of NDEA treated rats as the indices of oxidative stress, however, ALA pre-treated rats administered NDEA showed decreased LPO, ODC and conjugated dienes (day 21). Superoxide dismutase, total glutathione content and catalase activity was inhibited with NDEA treatment, however, ALA pre-treatment showed recovery activity. Activities of serum aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP) and lactate dehydrogenase (LDH) were increased significantly following NDEA treatment to rats with or without ALA pre-treatment. The activities of AST and ALT enzymes were significantly reduced on days 14 and 21 and ALP activity was reduced on day 21 in NDEA+ ALA (100 mg/kg)treated animals when compared to NDEA treated alone. NDEA treated animals showed alterations in normal renal histoarchitecture, which comprised of necrosis and vacuolization of the cells and it restored to normalize with ALA treatment.

Conclusion

This study concludes that the pre-treatment with ALA prior to the administration of NDEA, reduced the degree of oxidative stress, although this ALA produced only slight changes in the renal and hepatic injury, in a time-dependent manner.

keyword

A-Linolenic acid, Carcinogen, Aminotransferase

P2-02

Taenia Infection Diagnosed by Colonoscopy: A Report of Two Cases

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Background(Aims)

Human taeniases are intestinal infections by the adult tapeworm such as Taenia solium (pork tapeworm) or Taenia saginata (beef tapeworm). They are caused by eating raw or undercooked meat. Tapeworms are usually asymptomatic and can be found in unexpected sites of the small bowel or colon, surprising endoscopists. It is rare to find a tapeworm by colonoscopy. Here we describe the two cases of taenia infection that were diagnosed by colonoscopy.

Methods

Case 1. A 50-year-old male patient presented in our clinic with anal itching and abdominal discomfort. His past medical history and family history were unremarkable. Results from physical exam were within normal limits. Laboratory tests showed hemoglobin 14.8 g/dL, white blood cell count 6700 cell/mm3 and liver function tests were normal. A viral marker for hepatitis B and a serologic investigation for the immunocompromised state (HIV antibody) were all negative. A colonoscopy was carried out and a white movable tapeworm was found in the rectum (Fig.1A). The tapeworm was extracted with a biopsy forcep. Case 2. A 66-year-old male patient visited our clinic with a history of bowel habit change with frequent defecation. Results from physical exam were within normal limits. Hemoglobin level was 14.3 g/dL, and white blood cell count was 5900/mm3. The laboratory blood tests were within normal limit. Colonoscopy revealed a white mobile tapeworm in the terminal ileum (Fig 2B).

Results

Histological examination of the extracted parasites revealed a segment of body called proglottid, covered by tegmentum, and having multiple branched uterus and eggs. These findings were morphologically consistent with Taenia spp. In these two patients, after removal of the tapeworm, a dose of praziquantel was administered.

Conclusions

Taenia may be accidentally found during colonoscopy and the endoscopists can successfully remove the parasite using biopsy forcep.

keyword

Taenia, Tapeworm, Colonoscopy

P2-03

Perioperative results and long-term quality of life after colorectal resections for DIE with “safe anastomosis” technique.

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Objective

To study perioperative and long-term functional results in patients with colorectal endometriosis who underwent segmental bowel resections using “safe anastomosis” technique.

Materials and Methods

A retrospective study included 83 patients with deep infiltrative endometriosis who underwent surgical treatment with segmental bowel resection between 2016-2023 years. The preoperative characteristics assessed were gender, age, BMI, ASA status, ENZIAN classification. All surgeries performed by two teams (gynecologic & colorectal) using laparoscopic access. The key points of “safe anastomosis” technique were: wide “holy plane” oriented dissection of rectosigmoid colon with full blood vessels and nerve plexus control, adequate segmental resection of all multiple lesions with tension-free anastomosis, differentiated use of end-to-end and side-to-end anastomosis depending on the anatomical features of the sigmoid colon, suturing the crossing points of staple. Functional outcomes were studied using Endometriosis Health Profile-30 scales.

Results

Segmental resection of rectum and sigmoid colon were in 73 (88%) cases, and ileocecal resection in 10 (12%). Simultaneous operations (left-side & right-side lesions) were performed in 20 patients (24%). The average operation time was 258.2±82.8 min, estimated blood loss 127.2 ml (10-400 ml). Intraoperative ureteral stenting was performed in two patients (2,4%). Protective ileostomy was required in one patient. The median postoperative hospital stay was 6.7±3.9 days. The time of passage of the first stool is 3.9±2.7 days. Postoperative complications rate was 12%. Clavien-Dindo type 3 events were in 4 cases (one anastomotic leakage, two rectal bleeding from circular stapler line treated by endoscopy and one diagnostic laparoscopy). The incidence of urine retention requiring prolonger bladder catheterization was 2.4%. Long-term outcomes were evaluated by telephone call. There was a positive effect after surgical treatment on the EHP-30 scale for pain reduction (before surgery (BS) 22.6±14.7 and after surgery (AS) 2.1±3.6, $p<0.05$), control and asthenia (BS 12.4±8.2, AS 2.3±4.1, $p<0.05$), emotional well-being (BS 7.6±4.7, AS 2.7±2.9, $p<0.05$), social support (BS 7.2±6.2, AS 2.7±3.7, $p<0.05$), self-perception (BS 2.5±3.1, AS 1.1±2.0, $p<0.05$), occupation (BS 4.5±5.2, AS 0.4±1.7, $p<0.05$), sexual intercourse (BS 6.5±6.3, AS 1.7±3.6, $p<0.05$), relationship with medical doctor (BS 5.6±5.2, AS 0.7±1.7, $p<0.05$), disappointment from treatment (BS 4.5±3.5, AS 1.8±2.7, $p<0.05$).

Conclusion

The introduction of a two-team approach for laparoscopic segmental colorectal resections for deep endometriosis using key points of “safe anastomosis” allows minimizing the risk of stoma formation and statistically significantly improving the quality of life after surgery.

keyword

Segmental bowel resection, Deep infiltrative endometriosis, Laparoscopy, Colorectal endometriosis

P2-04

(Case Report) Anorectal inflammation in a patient diagnosed with HIV and Monkeypox synchronously.

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The most recent Monkeypox (m-Pox) outbreak is mostly affecting men who have sex with men (MSM) who participate in high-risk sexual behaviors, which is typically the case among Human Immunodeficiency Virus (HIV) carriers, according to clinical and epidemiological statistics. A 21-year-old male who returned from USA complained anal pain with itching and spotting. On the anorectal examination under spinal anesthesia, there were multiple ruptured blisters on perianal skin and mucosal ulcerations with thick exudates on anal mucosa. Colonoscopy revealed multiple aphthous ulcers with inflammatory polyps and exudates in the lower rectum, and so a detailed history was taken and a laboratory test was performed under the suspicion of inflammatory proctitis. After that, he confessed that he have had a homosexuality, and m-Pox virus was detected in the PCR test along with HIV in the Western blot test. CD4+ T cell counts were measured 110 cells/mm^3, HIV RNA > 107 copies/ml. Empirical ceftriaxone, metronidazole, and doxycycline were administered intravenously, and then it changed to ampicillin/sulbactam following by ciprofloxacin. Budesonide enema was used to relieve symptoms of anorectal inflammation. After the diagnosis of HIV and m-Pox, HAART (Highly Active Anti-Retroviral therapy) administered with Dolutegravir (DTG), lamivudine (3TC) and Abacavir (ABC) for HIV and Tecovirimat for m-Pox.

keyword

HIV, Monkeypox, Anorectal inflammation

P2-05

Left-sided Amyand Hernia with Mobile Cecum: a Surgical Dilemma

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Background

Amyand Hernia, defined as presence of appendix within the sac of an inguinal hernia, is a rare clinical entity. Left-sided Amyand hernia is a rarer entity and could be associated with a mobile cecum. We report a case of left-sided incarcerated Amyand Hernia with a probable mobile cecum.

Case Presentation

A 48-M with long-standing left inguino-scrotal mass that is reducible presented at the emergency department due to acute onset of non-reducible left inguinoscrotal mass with severe pain with episode of vomiting. He underwent Emergency Inguinal Exploration, Left, with noted incarcerated bowel segment from distal ileum to cecum including a normal-looking appendix. Manual reduction of bowel segments done then proceeded with high ligation of hernial sac and mesh hernia repair. Post-operative course was uneventful and was sent home after 5 days. Follow-up done until 6 months with no noted complications.

Conclusion

Incarcerated Left-sided Amyand Hernia with normal appendix and probable mobile cecum present a surgical dilemma. A recommendation by Losanoff and Bason on Type 1 Amyand Hernia is whether to do reduction or appendectomy depending on age. However, there was no recommendation based on the laterality of the hernia. A left-sided Amyand hernia presumed to be due to mobile cecum could present as a diagnostic dilemma if a patient eventually develops Appendicitis presenting with a left lower abdominal pain. This entity also predisposes patient to possible occurrence of cecal volvulus secondary to mobile cecum which the patient should also be advised on. In this case, reduction of the hernial contents was only done and patient was advised regarding the possibility of an atypical presentation of Acute Appendicitis on the left side due to a mobile cecum.

keyword

Amyand Hernia, Left-Sided Amyand Hernia, Inguinal Hernia, Mobile Cecum

P2-06

Current Concepts in Colonic Diverticular Disease

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CURRENT MANAGEMENT OF DIVERTICULAR DISEASE

Diverticulosis of the colon may be congenital and true diverticulum or more usually refer to herniations of mucosa and submucosa only and are therefore pseudodiverticulosis. Pancolonic diverticulosis are commoner in Asians and left sided diverticulosis commoner in Westerners. The prevalence of diverticulosis also increases with age, and 75% of those above 70 have diverticulosis although most are asymptomatic.

Many doctors still consider the lack of dietary fibre as a cause of colonic diverticulosis, but no study has demonstrated the usefulness of fibre in either reducing the prevalence of diverticulosis or of decreasing the complications of the disease. In fact, both diverticulosis and the complications thereof may be increased by the increasing dietary fibre.

The complications of diverticulosis may be related to diverticulitis, colonic bleeding, colonic fistulation or stricture and obstruction.

The management of diverticulitis depends on the degree of peritoneal contamination as outlined by Hinchey's classification. Minor peritoneal contamination may be treated conservatively but more serious infection will need surgery with the extent of surgery dictated by the seriousness of the peritoneal infection, the extent of the colonic involvement as well as the general health of the patient. The use of laparoscopic lavage and washout was in vogue a few years ago but is currently being questioned. The use of a defunctioning stoma in patients with perforated diverticulosis may be considered in very seriously compromised patients.

Diverticular bleeding characteristically presents with dark cherry red blood per rectum. 3 vessel mesenteric angiography is the classical investigation and treatment of choice. The author prefers repeated colonoscopy and vessel clipping if needed. The use of warm water irrigation had been shown by us to be a very useful technique of localising bleeders during such colonoscopy.

Colonic fistula into surrounding viscus or skin may happen and the most

keyword
Colonic Diverticulosis

P2-07

Colopleural fistula: a rare case of diverticulitis induced lung abscess formation

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Fistulas between the abdomen and pleura are very rare, and not many cases have been reported. Colopleural fistula (CF) has a very high mortality rate and requires surgery upon diagnosis. Here we present a case of a patient whose CF progressed to a lung abscess due to diverticulitis.

A 63-year-old male patient was transferred to our hospital due to epistaxis during antibiotic therapy at a local hospital with a diagnosis of sepsis and pneumonia with lung abscess of Left lower lobe (LLL). The patient was diagnosed with diabetes mellitus and atrial fibrillation as comorbidities and had a history of primary repair for gastric ulcer perforation. Antibiotics were Piperacillin/tazobactam 4.5 grams 4 times and levofloxacin daily for 5 days, but the infection persisted and pancytopenia and metabolic acidosis progressed. After hospitalization, the antibiotic was changed to intravenous cefepime. On the 6th day of hospitalization, a follow-up computed tomography revealed a colopulmonary fistula between the LLL and splenic flexure (SF) colon. In addition, a colonoscopy showed a diverticulum in the SF and a connection to a lung abscess. In response, left hemicolectomy, small bowel adhesiolysis, video-assisted thoracic LLL, and diaphragm primary repair of the fistula site were performed in the thoracic surgery department. When exploratory laparotomy was performed due to pus like drainage around postoperative day 10, irrigation was performed for intraabdominal abscess. The patient underwent emergency EGD for hematemesis around 15 days after reoperation, and bleeding control for huge gastric ulcer was performed. The patient was discharged after 2 weeks without further complications.

Lung abscesses caused by CF are rare and almost always diagnostically challenging. However, pneumonia with a lung abscess that does not respond to prolonged antibiotic therapy should be the first suspicion for CF and should be diagnosed quickly and treated surgically.

keyword

Lung abscess, Colopleural fistula, Diverticular disease, Left hemicolectomy

P2-08

Desmoid-type fibromatosis originated from jejunal mesentery

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Desmoid-type fibromatosis (DTF) is a tumor-like proliferating fibrous tissue disease characterized by monoclonal, fibroblastic proliferation. It tends to occur in deep soft tissues, and local recurrence is common.

The case we present involves a 53-year-old female with no past medical history who was referred to our hospital due to an abdominal mass. A CT scan revealed a well-defined, 4.8cm-sized mass in the jejunal mesentery. Surgery was performed by a specialist in surgical oncology, which included resection of the proximal jejunum surrounding the mass. Histological findings confirmed that the tumor was a DTF originating from the small bowel mesentery. The patient was discharged from the hospital on postoperative day #8 without any complications. No recurrence has been reported to date.

Although treatment options are varied, a stable guideline for this disease is not well established due to its rarity. The primary treatment option is surgery, but radiation therapy, systemic therapy, and even genetic approaches are also being explored. Surgeons faced with this tumor should make an optimal choice to enhance the quality of life for their patients.

keyword

Desmoid type-Fibromatosis, Desmoid tumor, Sarcoma, Mesentery origin

P2-09

Sporadic Colorectal Cancer in Ulcerative Colitis Patients: A Report of Two Cases Involving Non- Colitic Sites

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Background

Sporadic colorectal cancer (CRC) in ulcerative colitis (UC) patients, particularly in regions not affected by colitis, poses unique clinical challenges. The optimal surgical management for UC patients with sporadic CRC remains questionable. Differentiating sporadic CRC from colitis-associated CRC can sometimes be challenging histopathologically.

Method

This report describes two cases of sporadic CRC in UC patients occurring outside typical colitis-affected regions. The first case involves a 62-year-old female with UC confined to the rectum who developed ascending colon cancer. She underwent a laparoscopic right hemicolectomy, revealing T3N1bM0 adenocarcinoma. Given the nodal involvement, she received adjuvant chemotherapy. The second case is a 53-year-old female with UC restricted to the sigmoid colon, presenting with acute appendicitis. Severe adhesions and malignancy suspicion led to a laparoscopic right hemicolectomy, confirming T3N0M0 appendiceal cancer. Both cases showed adenocarcinoma in normal mucosa without colitis or dysplasia.

Results

These cases highlight the need to consider sporadic CRC in UC patients, even in regions not typically affected by colitis. Distinguishing between colitis-associated and sporadic CRC is crucial for appropriate management. Both cases had a short history of localized UC controlled with medical treatment, leading to laparoscopic right hemicolectomy. Regular surveillance, including colonoscopies and biopsies, is essential for early detection and treatment. Both cases underscore adjuvant chemotherapy's importance, with nodal involvement in the first case and high-risk stage II status in the second.

Conclusion

Vigilant surveillance and suspicion for malignancy in UC patients, even in areas not typically affected by colitis, are essential. Patients with a short history of UC and regional colitis have a chance of developing both sporadic and colitis-associated CRC. Surgical resection extent should be based on careful review of UC extent, duration, and patient condition. Proper evaluation and surgical management are crucial to optimize outcomes, emphasizing personalized treatment approaches in managing sporadic CRC in UC patients.

keyword

Ulcerative colitis, Sporadic colorectal cancer, Inflammatory bowel disease, Appendiceal cancer

P2-11

Novel endoscopic clip for effective management of gastrointestinal perforations: Ex-vivo and In- vivo evaluation

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Background/Aims

Gastrointestinal (GI) perforations present significant clinical challenges, with an increasing number of cases due to the rising prevalence of endoscopic procedures and advancements in tumor resection techniques. These developments have increased the potential for perforation occurrences, necessitating more effective management strategies. This study introduces a novel kinetic utility (KU) clip designed to address these challenges.

Methods

ex vivo experiments were conducted using pig stomach tissue to compare the performance of the KU clip and through the-scope-clip (TTSC). Maximal force and area under the curve (AUC) were measured. In vivo experiment involved creating iatrogenic perforations in pigs, applying the KU clip, and monitoring healing and safety outcomes.

Results

Ex vivo experiments showed a difference between TTSC and KU group, a p-value of 0.08 for maximal force, 0.01 for AUC. In vivo experiment validates the effectiveness of the KU clip, showing minimal inflammation and no significant adverse reactions.

Conclusion

the KU clip demonstrates a potential as a versatile and effective tool for endoscopic management of GI perforations.

keyword

Endoscopic clip, Perforation, Endoscopy, Animal experiment, Ex vivo

P2-12

Specialized training can reduce the recurrence rate of Pilonidal sinus and improve the outcomes- 5 year single institution data

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Background

Pilonidal Sinus surgery is controversial, and its recurrence rates have been reported to be high as 30%. Long-term morbidity and recurrent infection affect patients' quality of life. This study aimed to compare the recurrence rate of the different surgical modalities of pilonidal sinus disease.

Methods

A retrospective study was done from 2016-2021.Adults who had elective Pilonidal surgery were included. Recurrence was defined as an active disease episode that required medical or surgical intervention >30 days from surgery. Results were analysed to identify factors associated with the recurrence.

Results

208 patients were included,80.3% male, the mean of 31.2 years (average 18-81), and the mean follow-up was 47 (range 13- 60) months.13.5% was a recurrence from previous surgery. The recurrence rate was in 19 cases(9%).The lay-open, flap, and excision with simple closure techniques were used retrospectively in 10.5%,15.8%, and 73.7% of the recurrent cases. In subgroup analysis;16.6% of the lay-open technique had a recurrence, while 10.8% with simple closure. Only 6.7% of the flap technique had a recurrence. When the surgeon specialty was analysed as a factor of recurrence, colorectal surgeons did 26.32% of the recurrent cases, and their recurrence rate was 6.3%.In comparison, non-colorectal general surgeons operated on 63.2% of the recurrent cases, and their recurrence rate was 11.4%. Plastic surgeons operated on 10.5% of the recurrent cases, and their recurrence rate was 8.7%.

Conclusions

Flaps can reduce the recurrence of Pilonidal Sinus, especially if done by a trained surgeon. Including Pilonidal Sinus flap reconstruction training in the indexed procedure in colorectal training could improve the outcome.

keyword

Pilonidal sinus, Recurrence, Training, Specialisation

P3-01

Double Trouble: A Case Report on Co-existing Gastrointestinal Tuberculosis with Colon Adenocarcinoma on a Filipino Patient

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Gastrointestinal Tuberculosis (GI TB) and Adenocarcinoma are two distinct disease entities that affect the colorectal region. Their co-existence provides clinicians with a diagnostic and therapeutic dilemma with limited number of reported cases worldwide, mostly from developing countries like India. This case is reported to note the possibility of both pathologies to co-exist in the colon and to briefly discuss the diagnostic and therapeutic approach.

Here we present a case of a 69-year old Filipino male who presented with chronic right lower quadrant pain, associated with hematochezia and weight loss. He presented at the emergency department with clinical signs of intestinal obstruction. On CT Scan of the Whole Abdomen with Triple Contrast, irregular wall thickening was noted at the ileocecal junction. Hence, a right hemicolectomy, end ileostomy, and mucus fistula were done. Histological findings were consistent for both moderately differentiated adenocarcinoma of the colon and Gastrointestinal Tuberculosis, after which the patient was started on anti-Koch's regimen for GI TB.

Previous case reports of co-existing tuberculosis and colorectal cancer are more commonly seen in females with lesions mostly situated in the right side of the colon, and most of the described histopathological type were of mucinous type. Previous case series of co-existing tuberculosis and colorectal cancer have debated on whether one disease may have caused the other. Their co-existence in an extrapulmonary setting is very rare, thus there is still no consensus if GI TB causes colorectal cancer or vice-versa. Further studies and case reports are needed to determine the relationship between the two disease entities, and to increase awareness that these two illnesses may co-exist, especially in TB-endemic countries like the Philippines.

keyword

Adenocarcinoma, Gastrointestinal Tuberculosis, Colorectal Cancer, Co-Existing Disease, Philippines

P3-02

TME quality in rectal cancer surgery affects local recurrence rate but not distant recurrence and survival: a population-based cohort study.

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Background

The quality of the total mesorectal excision (TME) specimen in rectal cancer surgery is assessed with a three-tier grade (mesorectal, intramesorectal and muscularis propria). This study aimed to analyse the prognostic value of the TME grade, and identify risk factors for intramesorectal and muscularis propria resection in a population based setting.

Methods

All patients in the Swedish colorectal cancer registry with rectal cancer stage I-III ?10 cm from the anal verge, diagnosed 2015-2019, undergoing TME were analysed. Postoperative mortality < 30 days, or recurrence within 90 days were exclusion criteria for survival- and recurrence analysis. Recurrence-free patients with less than three years follow-up, and patients lacking data regarding recurrence, were also excluded from recurrence analyses. The primary outcomes were local- and distant recurrence and overall- and relative survival; secondary outcomes were risk factors for intramesorectal or muscularis propria resection.

Results

In all, 1 499 patients were eligible for recurrence-, 2 441 patients for survival- and 2 476 patients for risk-factor analysis. Muscularis propria resection was an independent risk factor for local recurrence in multivariable analysis (HR 2.73 (1.07-7.0) p = 0.036). TME grade had no impact on distant recurrence or survival. Female sex, tumour level <5 cm, abdominoperineal resection, minimally invasive surgery (laparoscopic and robotic), high blood loss, long duration of surgery, and intraoperative perforation were independent risk factors for intramesorectal and/or muscularis propria resection in multivariable analyses.

Conclusion

Muscularis propria resection increases the risk of local recurrence, but does not seem to affect distant recurrence or survival

keyword

Rectal cancer, TME, TME grade, Recurrence

P3-03

Is Primary surgical treatment of anal carcinoma safe and cost-effective in low resource settings?

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Aim

The aim of the study was to debate if primary surgical treatment (abdominoperineal (AP) resection of anal carcinoma remains safe and effective in low resource settings especially when considering the cost, availability, quality, protracted treatment and complications of chemo-radiotherapy.

Methods

An electronic literature search were performed to identify original published studies on anal carcinoma and management.

Results

The arguments for surgery as primary treatment are (1) Surgery is the primary treatment modality for small perianal lesions that can be locally excised, (2) Oncological outcome of primary surgical treatment is equivalent to chemo-radiotherapy with a 55% 5-yr survival after a potentially curable AP resection of early locally advanced anal cancer, (3) 50% relapse after complete remission using chemo-radiation, and many can be salvaged by AP resection but carries a high morbidity at this time, (4) Four situations may require surgery after primary chemo-radiotherapy. (i) residual tumour, (ii) complications of treatment, (iii) incontinence or fistula after tumour resolution, (iv) subsequent tumour recurrence, (5) Only a generous biopsy will reveal residual disease in a residual ulcer for which a salvage AP resection may be the only option as further radiotherapy cannot be given.

The arguments against surgery as primary treatment are (a) Organ preservation and avoidance of stoma renders better quality of life, (b) Increased tumour radio- sensitivity in the undisturbed pelvis with well oxygenated tissues and less small bowel in the radiation field limit toxicity, (c) Radiotherapy will reduce local recurrence better than after surgery.

Conclusions

Primary surgical treatment of anal cancer may remain safe and cost-effective in low resource settings provided the patients are pre-operatively well counselled and trained in stoma care management

keyword

Anus, Cancer, Abdomino-Perineal excision, Chemo-Radiotherapy, Wide local excision

P3-04

Robot-assisted rectal surgery using the hinotoriTM surgical robot system: Report of three cases

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Background

The hinotoriTM Surgical Robot System, exhibiting advantages such as an operating arm with eight axes, an adjustable arm base, and a flexible three-dimensional viewer, was approved for colorectal cancer surgery in Japan in 2022. However, limited information is available on the related feasibility and safety of each surgery type. Therefore, in this study, we aimed at describing the perioperative outcomes of three patients who underwent robot-assisted rectal surgery (RARS).

Method

In our study, we included three patients with rectal tumors who underwent RARS between February and March 2024 at our institution. We retrospectively analyzed the comprehensive perioperative outcomes in these patients.

Results

All three patients were males with a median age and body mass index of 54 years and 23.5 kg/m2, respectively. The surgical procedures included low anterior resection using the double stapling technique in one case and coloanal anastomosis in another as well as high anterior resection in the third case. All the procedures could be completed without conversion to open surgery. The median operative time, robotic system usage time, estimated blood loss, and length of hospital stay in the three cases were 446 min, 212 min, 15 mL, and 14 days, respectively. No patient experienced perioperative complications of any grade, and the circumferential resection margin was negative for cancer in all the cases.

Conclusion

In this study, we report three cases of anterior resection for rectal tumors using the hinotori™ Surgical Robot System, performing safe and appropriate oncological surgery.

keyword

Rectal surgery, Robot , Hinotori

P3-05

A prospective study on recovery from postoperative sarcopenia during adjuvant CAPOX therapy for colorectal cancer focusing on sex disparity

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Background

Women are predisposed to develop intolerance to cancer chemotherapy. Sarcopenia and chemotherapy are mutually related. Although adjuvant oxaliplatin-based chemotherapy, e.g. CAPOX, is commonly used to treat colorectal cancer, its effects on patients in terms of sarcopenia and sex remain unknown. Therefore, we aimed to investigate how metrics for diagnosing sarcopenia change during adjuvant oxaliplatin-based chemotherapy including and examined sex disparities in these parameters.

Methods

We conducted a prospective study on diagnostic metrics used for sarcopenia in colorectal cancer patients receiving adjuvant CAPOX. Evaluations of the nutritional status by a questionnaire-based 'Mini-Nutritional Assessment (MNA)' score, gait speed, grip strength, skeletal muscle mass, fat mass, and bone mineral content using a body composition analyzer were performed in the first, fourth, and eighth cycles of CAPOX (first, second, and third measurements, respectively).

Results

Sixty patients were eligible, among whom 49 and 38 underwent the second and third measurements, respectively. Forty-four patients completed four CAPOX cycles, while 23 completed eight cycles. In all available cohorts, median differences in MNA score, gait, grip strength, muscle mass, fat mass, and bone mineral content between the first and second measurements for men (n=26) and women (n=23) were +9.3 and +2.4% (p=0.16), +6.8 and -2.6% (p=0.19), +1.3 and -0.2% (p=0.92), +3.1 and +1.1% (p=0.014), +2.9 and +3.8% (p=0.87), and +3.6 and -0.9% (p=0.016), respectively. Sex-dependent differences in muscle mass and bone mineral content were similarly observed in patients who completed four CAPOX cycles. There were no sex differences in comparisons of the above metrics between the first and third measurements.

Conclusion

Early cycles of adjuvant CAPOX may have a greater negative impact on postoperative recovery of skeletal muscle mass and bone mineral content in women compared to men.

keyword

Colorectal cancer , Adjuvant chemotherapy, Sarcopenia, Sex disparity

P3-06

A Study of Breast Cancer Diagnosed During Postoperative Surveillance for Colorectal Cancer

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Background

The postoperative surveillance for colorectal cancer (CRC) focuses on early detection of recurrence and early therapeutic intervention. CRC surveillance malignancies may be detected incidentally during surveillance but screening for other cancers is also important. We present cases of breast cancer(BC) diagnosed during postoperative surveillance for CRC.

Patients and Methods

Seven BCs diagnosed during postoperative surveillance for CRC were analyzed among patients who underwent CRC surgery between January 2020 and April 2024. The clinical characteristics of these cases were reviewed.

Results

The average age at CRC surgery was 66.8 yo, female/male:6/1, CRC stage I/II:3/4. Three cases had past history of cancer (case #3: ureter [30 y], case #4: ureter [75y], case #5: duodenum [76y]). One case had a family history of CRC. Family history of other cancers were pancreas (4 cases), prostate (2 cases), stomach, gallbladder, kidney, liver, thyroid, and uterine (1 case each). Regarding reasons for BC diagnosis, five BCs were detected by CT during postoperative surveillance and two BCs were detected through symptoms (breast pain and palpable masses). T-stages of CT-detected BCs were Tis/T1/T2: 2/3/2, whereas two symptomatic BCs were T2. The stages of BCs were 0/I/II:2/3/2. However, no cases had been tested with mammography as screening. Four CRCs underwent mismatch repair(MMR)-immunohistochemistry, deficient-MMR/proficient-MMR:3/1. Two cases had genetic testing for Lynch syndrome and hereditary breast and ovarian cancer (HBOC) but were not confirmed diagnosis.

Conclusion

All BCs diagnosed during postoperative surveillance had no previous mammography. The symptomatic cases were not detected by CRC postoperative surveillance even though T2 lesions, suggesting mammography is important as BC screening. Although this study did not identify any cases of Lynch syndrome or HBOC, surveillance considering hereditary tumor syndromes is essential for CRC patients with family history.

keyword

Breast Cancer , Postoperative Surveillance, Colorectal Cancer

P3-07

Usefulness of a powered circular stapler compared to a manual circular stapler in patients undergoing colorectal cancer surgery: a retrospective cohort study

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Background

Postoperative complications related to anastomosis, including anastomotic bleeding and leakage, significantly affect both short-term and long-term patient outcomes. Short-term outcomes impacted include the length of hospital stay and reoperation rates, while long-term outcomes relate to disease-free and overall survival, particularly due to the influence on the administration of postoperative chemotherapy. Although circular staplers and double-stapled techniques have been staples in anastomotic methods for over 40 years, the impact of different anastomotic devices on suture complications during intestinal anastomosis remains unclear. This study evaluates the effectiveness of automated anastomotic devices in reducing the risks of anastomotic complications.

Methods

A retrospective cohort study was conducted on colorectal cancer surgeries performed at our institution from 2018 to 2022 where an anastomosis device was utilized. We excluded cases involving emergency surgery, inflammatory bowel disease, and simultaneous surgery for other cancers. Anastomosis was performed manually using either the ETHICON Circular Stapler CDH or the EEA Circular Stapler and automatically using the ECHELON CIRCULAR Powered Stapler (PCS), ensuring no operator bias. The primary outcomes measured were postoperative complications, focusing on anastomotic leakage and hemorrhage.

Results

The study included 414 patients, with 183 in the manual stapler group (MCS) and 231 in the powered stapler group (PCS). Univariate analysis identified significant differences in surgical sites and methodologies. Although no statistically significant association was found between the type of anastomotic device used and the occurrence of anastomotic complications, there was a notable increased risk ratio for complications in the manual group compared to the automatic group, particularly among elderly patients.

Conclusion

The findings of this study suggest that using a powered circular stapler may reduce the risk of anastomotic complications in elderly patients undergoing colorectal cancer surgery.

keyword

Automated anastomosis device, Colorectal cancer, Anastomosis

P3-08

Initial experience of laparoscopic ISR for low rectal cancer in National Cancer Center of Mongolia

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Introduction

Abdominoperineal resection is regarded as a standard procedure for curative surgical treatment in patients with low rectal cancer. In recent years, anus-preserving surgeries, including intersphincteric resection (ISR) and total mesorectal excision (TME) that technique has given a chance of sphincter-saving surgery for patients with distal rectal cancer during the last two decades and that have been widely performed for low rectal cancer and can significantly avoid a permanent stoma.

Method

We analyzed patient's characteristics, cancer types, location, surgical outcomes, postoperative pathology reports and postoperative anal function by the Wexner score. Study data collected prospectively. Postoperative follow up examined every 6 months after surgery. Anal function assessed by the Wexner score every 3 months postoperatively.

Result

From 2016 to 2023, we did 4 laparoscopic intersphincteric resection for low rectal cancer patients. Every operation's abdominal part was done by laparoscopic method and coloanal anastomosis was done by handsewn technique. We analyzed last three patient's information retrospectively. Average operation duration was 303 min. Intraoperative blood loss was 205ml (300, 220, 200, 100). About the external anal sphincter resection types, one subtotal and 2 partial resections done. Anastomotic level from AV was 1, 2 and 1cm. Tumor location from AV was 3-4cm, 3cm and 6-10cm respectively. Bowel motility average time was 51min and average hospital stay was 9. We analyzed postoperative complication by Clavien-Dindo, patients had grade IIA, I, IIIA. Overall complication rate was 33.3%.

Conclusion

The laparoscopic intersphincteric resection technique provides an opportunity to perform sphincter-saving surgery in treatment of distal rectal cancer. In Mongolia colorectal cancer incidence and mortality is increasing year by year, from that we need increase the number of operation- ISR in Low rectal cancer patients and provide good life quality (without permanent colostomy) to patients who are diagnosed with rectal cancer.

keyword

Low rectal cancer, Sphincter preservation , Laparoscopic surgery

P3-09

Surgical Outcomes in Colonic versus Rectal Cancer Patients with Sarcopenia After Prehabilitation

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Background

Sarcopenia is characterized by the progressive loss in skeletal muscle mass and strength. Evidence suggests sarcopenia is linked with worse overall survival, longer length of stay (LOS) and higher risk of complications in post-operative colorectal cancer patients. In particular, rectal surgery has been shown to have higher risk of morbidity. In this study we explore if sarcopenia status after prehabilitation has an impact in outcomes in rectal surgery compared to colon surgery.

Methods

Patients underwent colorectal resection surgery between 2020 and 2023 in a tertiary institution in Singapore were enrolled prospectively. Each patient's sarcopenic status was obtained by measurement of appendicular skeletal muscle. Sarcopenic patients were then enrolled in a multidisciplinary, multimodal prehabilitation prior to colon or rectal cancer surgery. Patient demographics and outcomes were collected. Primary outcomes were post-operative morbidity and LOS.

Results

284 patients underwent colorectal cancer resection surgery between 2020 and 2023. The median age of the cohort was 67 (10.62). Of the patients who underwent surgery, 32 (11.3%) were sarcopenic and 51 (18%) were severely sarcopenic. 72.9% of patients underwent rectal surgery. The most commonly performed surgery was anterior resection (52.5%). The analyses showed that there was no significant difference in the LOS, morbidity, presence of recurrence and all-cause mortality between the rectal and colon groups in the univariate analysis. On multivariate analysis, it did not show statistical significance that sarcopenia (RR=2.3, p=0.112) and rectal surgery (RR=2.36, p=0.186) were associated with higher risks of morbidity.

Conclusion

Sarcopenic patients following prehabilitation did not show a significant difference in clinical outcomes in rectal or colonic cancer surgery. These findings suggest prehabilitation is an effective way to optimize sarcopenic patients prior to colorectal cancer surgery with outstanding outcomes.

keyword

Sarcopenia, Prehabilitation, Nutrition, Colorectal surgery, Rectal surgery

P3-10

Deep learning of colonoscopy images predicts the treatment response of preoperative chemotherapy for rectal cancer

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Background/Aims

Assessing the response to preoperative therapy for rectal cancer typically involves comparing imaging data collected before and after treatment alongside postoperative pathology. However, there is a growing need to reliably predict response before initiating preoperative treatment. In this study, we constructed a model to predict the response of rectal cancer to preoperative chemotherapy by analyzing colonoscopy images using a deep learning network.

Methods

We retrospectively analyzed data from 53 patients who underwent radical resection after preoperative chemotherapy for advanced rectal cancer at Osaka University Hospital between January 2011 and August 2019. We employed AlexNet implemented in Matlab 2023b (MathWorks) to build the model. A convolutional neural network model was trained on 403 images from 43 patients while 84 images from 10 patients served as the validation set to assess diagnostic accuracy for predicting poor response to preoperative chemotherapy as the validation set.

Results

The model demonstrated a sensitivity of 77.6% (38/49), specificity of 62.9% (22/33), accuracy of 71.4% (60/84), positive predictive accuracy of 74.5% (38/51), and area under the curve of 0.713 in predicting poor response to neoadjuvant therapy. Additionally, the model was applied to 49 images of 10 patients who received preoperative chemoradiotherapy, achieving a sensitivity of 74.1% (23/31), specificity of 50.0% (9/18), and an accuracy of 65.3% (32/49).

Conclusions

Utilizing deep learning for analyzing colonoscopy images holds promise for accurately predicting rectal cancer response to preoperative chemotherapy.

keyword

Rectal cancer, Deep learning, Preoperative chemotherapy, Neoadjuvant theapy

P3-11

A Case of Santol Seeds Ingestion Presenting as Rectal Mass: A Diagnosis Dilemma

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Introduction

Santol (Sandoricum koetjape) is a common tropical fruit where its seed is ingested by Southeast Asians. In cases where it is lodged in the intestine, complications such as bowel obstruction and perforation can occur that could lead to significant morbidity (50%) and mortality (30%). Literature review revealed no reported cases of ingested fruit seeds mimicking a malignant-looking mass. In this case, diagnosis dilemma is encountered which affected the decision making in the pre-operative management of the patient initially diagnosed as a case of Rectal Carcinoma.

Case Presentation

This is the case of a 42-year-old female, non-smoker, with no family history of cancer, who presented with signs and symptoms of bowel obstruction. Santol seed ingestion was initially not elicited. Whole Abdominal CT scan and Pelvic MRI revealed circumferential rectosigmoid mass. Proctosigmoidoscopy and colonoscopy revealed an obstructing rectal mass. Results of the diagnostic procedures considered malignancy. However, biopsies done on two different institutions showed benign findings of nonspecific inflammation with no evidence of malignancy. The surgical team believed that sampling was inadequate, thus, cancer surgery was pursued. Patient was scheduled for low anterior resection with frozen section. However, intraoperative findings revealed lodged santol seeds 10-11 cm from anal verge deferring the preoperative plan.

Discussion

Known complications of santol seed ingestion which lodge into the bowel lumen are either bowel perforation or stercoral obstruction. There is no known record of ingested santol seed being covered by granuloma presenting as a malignant looking mass.

Conclusion

Achieving an accurate preoperative diagnosis is difficult unless a thorough history of Santol seed ingestion is obtained. This could have helped in the diagnosis of the patient and prevented unnecessary surgical interventions and delay in management.

P3-12

Examination of sarcopenia with obesity by Psoas muscle Mass Index in colorectal cancer patients as a prognostic factor

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Background (Aims)

Sarcopenia, the age-related loss of muscle mass, is recognized as a negative prognostic factor in gastrointestinal cancer. The combination of sarcopenia with visceral obesity, known as sarcopenic obesity, is associated with poorer outcomes. Our study explores the influence of obesity and other factors on the prognosis of colorectal cancer patients diagnosed with sarcopenia.

Methods

We enrolled 211 colorectal cancer patients diagnosed with preoperative sarcopenia who underwent radical resection at Osaka University Hospital from January 2009 to January 2012. Muscle mass was assessed using the Psoas Muscle Mass Index (PMI), calculated by dividing the sum of the bilateral iliopsoas muscle area at the third lumbar level by height squared. Obesity was evaluated by measuring the visceral fat area (VFA) at the umbilical level. Patients were categorized into two groups based on the presence of obesity: sarcopenia with obesity (SO) and sarcopenia without obesity (non-SO). We compared overall survival (OS), cancer-specific survival (CSS), and disease-free survival (DFS) between the two groups. Additionally, we analyzed patient characteristics including age, gender, Body Mass Index (BMI), albumin levels, C-reactive protein (CRP), tumor markers, Prognostic Nutritional Index (PNI), modified Glasgow Prognostic Score (mGPS), and Geriatric Nutritional Risk Index (GNRI).

Results

The DFS was significantly shorter in the SO group compared to the non-SO group (p=0.028). PNI, mGPS, and GNRI were not identified as significant prognostic factors for DFS. Multivariate analysis highlighted sarcopenic obesity, elevated carcinoembryonic antigen (CEA) levels, and unfavorable histological types as significant predictors of poor DFS outcomes.

Conclusions

Sarcopenic obesity is an independent predictor of poor prognosis in colorectal cancer patients. Interventions aimed at increasing muscle mass and reducing visceral fat could potentially improve prognosis

P3-13

Clinical and pathological correlations of recurrence after conventional follow-up completion in colorectal cancer patients

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Background

Patients with colorectal cancer typically have a 5-year post-surgery follow-up period. However, recurrences can occur unexpectedly after this period. This study aims to identify differences between patients who experience recurrence during and after the standard follow-up period and to find predictive factors for late recurrence.

Materials and Methods

The study included 710 patients who had recurrences following curative surgery for colorectal cancer from December 2007 to December 2015. Of these, 683 had recurrences within 5 years (intermediate recurrence), and 27 had recurrences after 5 years (late recurrence). The research focused on comparing clinical and pathological characteristics between these groups, particularly in terms of recurrence patterns.

Results

There were no significant differences in demographic characteristics between the groups. However, oncological characteristics differed notably. In the late recurrence group, a significantly higher percentage of patients had no venous invasion (96.3%, p=0.016) and no perineural invasion (85.2%, p=0.001). Logistic regression analysis considered factors like lymphatic invasion, venous invasion, perineural invasion, and carcinoembryonic antigen (CEA) levels before and after treatment. It found that absence of perineural invasion (OR: 0.229, p=0.008) and higher pre-treatment CEA levels (OR: 1.013, p=0.047) increased the likelihood of late recurrence.

Conclusion

The absence of perineural invasion and higher pre-operative CEA levels are associated with an increased risk of colorectal cancer recurrence beyond 5 years post-surgery. These findings suggest the necessity of extending the follow-up period for certain patients beyond the standard 5 years.

keyword : Late Recurrence, Colorectal Cancer

P3-14

Rectal Prolapse in Geriatric Patients with Colorectal Cancer: A Case Series

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Background

Rectal prolapse is a protrusion of the rectum passing through the anus cavity. Prolapse is more common in older women with a lax pelvic floor musculature and weak anal sphincters. The main symptoms are a painful, irreducible anal mass and bleeding from the mass. The aim of the surgical procedure is to correct the normal anatomy through resection of the tumour and fixation of the rectum to achieve normal function.

Case Report

The first case is a 79-year-old female with the chief complaint of a lump coming out of her anal in the last five days associated with pain in the anal. On physical examination, we found rectal prolapse associated with a rectal mass measuring 6.5 x 3 x 2 cm, fragile, and easily bleeding on the lateral side of the rectum. Proctosigmoidectomy, posterior levatorplasty, rectal resection, and anastomosis were performed. The histology confirmed the diagnosis as well as differentiated adenocarcinoma at the rectum (pT1N0Mx). The second case is a 79-year-old male with the chief complaint of a lump coming out after defecation one day prior. On physical examination, we found recto-sigmoidal prolapse associated with sigmoid mass measuring 5 x 4 x 2 cm, necrotic, fragile, and prone to bleed. Laparotomy, sigmoidectomy, rectopexy, and Hartmann procedures were performed. The histology confirmed the diagnosis as moderately differentiated adenocarcinoma at sigmoid (pT1N0Mx). Both of the patients were recovering well, and one month after surgery, both of them were doing well, and there were no signs of complications such as pain, fever, recurrence, or infection at the surgical site.

Conclusion

A patient with rectal prolapse who does not have any predisposing factors should be checked for a concomitant tumour. In order to improve patient management, every case of rectal prolapse should be carefully assessed before surgery to rule out underlying cancers.

P3-15

Ileal Angiolipoma Manifested as Ileocolic Intussusception

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Angiomyolipomas (AMLs), benign mesenchymal tumors, are composed of blood vessels, smooth muscle cells, and mature fat cells. These mesenchymal hamartomas arise primarily in the kidney. Extrarenal AMLs are very rare and AMLs of the small intestine are exceedingly rare.

This is a case report of a 61-year-old Female from Davao City, Philippines who came in due to Hematochezia. Patient underwent Colonoscopy which revealed an Ileocolic Intussusception. CT Scan of the Whole Abdomen done supporting the diagnosis of Ileocolic Intussusception with an enhancing lesion in the Ileal Segment. Rule out Malignancy. Patient then underwent Right Hemicolectomy in which by Histopathologic report revealed the diagnosis of an Ileal Angiolipoma

P3-16

Radiotherapy-induced transverse colon sarcoma: a case report of a rare and poorly understood complication.

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Background (Aims)

Sarcomas are myoepithelial tumors that represent 0.1% of primary colorectal malignancies, being those induced by radiotherapy even rarer (0.01%). The rectum is the most affected site, with few cases reported in the colon and its pathophysiological origin is poorly understood. Therefore, we present the case of a 48-year-old patient treated with chemo- and radiotherapy for gastric cancer who developed a radioinduced sarcoma in the transverse colon.

Methods

Case report. Informed consent was obtained at admission and clinical follow-up was performed 30 days after discharge.

Results

A 48-year-old male patient with a history of gastric cancer was treated with subtotal gastrectomy and chemoradiotherapy 12 years ago. He presented with chronic abdominal pain, weight loss, vomiting, melena, and hematemesis. An abdominal CT scan revealed wall thickening of the transverse colon and a neoplastic endoluminal mass. Total colonoscopy revealed a pedunculated tumor with necrotic margins in the transverse colon occupying 100% of the lumen. The pathology report showed a high-grade sarcoma (inflammatory leiomyosarcoma) with mucosal, submucosal and muscularis propria involvement. Given the history of radiotherapy in the affected region, the development of sarcoma in the irradiated area, a latency time of more than 2 years and histological confirmation of this kind of tumor, the diagnosis of radioinduced sarcoma was made. Tumor resection was performed by right hemicolectomy with ileocolic anastomosis without early postoperative complications, with negative lymphadenectomy in the pathology report of the surgical specimen. No new findings were found during outpatient follow-up.

Conclusions

Colorectal sarcomas secondary to radiotherapy are a rare complication of poorly understood nature. Their association to radiotherapeutic schemes should be further studied for their adequate understanding and prevention.

P3-17

Prolonged Postoperative Antibiotic Use Reduces Postoperative Complications in Elderly Patients with Colorectal Cancer

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Aims

The purpose of this study was to investigate whether prolonged antibiotic usage beyond conventional practices could impact the incidence of postoperative complications in elderly patients undergoing colorectal cancer surgery.

Methods

Between January 2016 and December 2022, a total of 292 patients aged over 70 years who underwent curative resection for colorectal cancer were identified from a retrospective database. The study population was divided into two groups: the POD#1 group, consisting of patients who received postoperative antibiotics for 1 day (n=214), and the POD#3 group, comprising patients who received postoperative antibiotics for at least 3 days (n=78).

Results

A significant difference between two groups was observed in the rates of total postoperative complications, infection-related complications and antibiotic reuse. In the POD#1 group, complications occurred at a rate of 25.7% (n=55), while the POD#3 group showed a lower complication rate of 14.1% (n=11) (p=0.036). The infection-related complications such as anastomotic leakage, wound infection, pneumonia occurred at a rate of 20.1% (n=43) in POD#1 group compared to 5.1% (n=4) in POD#3 group (p=0.002). The antibiotic re-use rate was 22.4% (n=48) in the POD#1 group and 11.5% (n=9) in the POD#3 group (p=0.038). In the multivariate analysis, ASA score (HR 1.79; 95% CI 1.09-2.97; p-value = 0.022) and postoperative antibiotic usage (HR 0.49; 95% CI 0.26-0.94; p-value = 0.032) emerged as independent risk factors for postoperative complications.

Conclusion

In colorectal cancer patients over the age of 70, prolonged antibiotic usage demonstrated a reduction in the rate of postoperative complications, including anastomotic leakage. Considering the potentially fatal consequences of postoperative complications in the elderly, the advantages of extended antibiotic administration beyond conventional usage outweigh the concerns regarding complications or costs associated with antibiotics use.

P3-18

The Oncologic Outcomes of Central Lymph Node Metastasis and Laparoscopic D3 Lymph Node Dissection in Right Colon Cancer

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Background/Aims

In recent years, there has been a trend towards adopting D3 dissection, which involves the removal of central lymph nodes, particularly in cases of late-stage disease. This study aims to evaluate the oncologic outcomes of patients undergoing D3 dissection for right colon cancer, with information of metastatic lymph node site.

Methods

Single center Retrospective review study. From January 2013 to August 2023, patients who received laparoscopic colon resection with D3 dissection due to right-side colon cancer included. Patients who had other malignancy at same time, colon cancer-related genetic disorder such as HNPCC(hereditary nonpolyposis colorectal cancer), FAP(familial adenomatous polyposis) excluded.

Results

Totally 939 patients was reviewed. There were 621 patients without lymph node metastasis(LN(-)) and 318 patients with lymph node metastasis(284 patients in peritumoral site, 91 in pericolic, 12 in central, include duplicated). The characteristics of the two groups were generally similar, but LN(+) group had longer operation time(151 vs 160, minutes), advanced T-stage, larger tumor size(4.2 vs 5, cm), shorter overall survival period(114.4 vs 91.0, month). When dividing LN(+) group by the location of the metastatic lymph nodes (peritumoral/pericolic/central group), the tumor size(4.8 vs 5.2 vs 6.6, cm), and overall survival period(93.6 vs 87.1 vs 32, month) were varied. There were 269 post-operative complications (28.6%), with 21 patients (2.2%) experiencing Clavien-Dindo grade III/IV complications.

Conclusion

We could confirm that Patients with lymph nodes metastasis have worse survival rate, and it seems related with large tumor size, advanced T-stage. In the LN(+) group, central group showed worse survival rates compared to peritumoral, pericolic group. Tumor size was shown to be a crucial factor in determining how far the positive lymph nodes have spread.

P3-19

The Impact of Powered Circular Staplers for Anastomotic Leak in Left-Sided Colorectal Cancer Surgeries

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Background

Since the introduction of powered circular staplers in colorectal surgery, there has been growing interest in their impact on reducing complications, particularly anastomotic leakage. This study compared short-term post-operative outcomes between powered and manual circular staplers.

Methods

This retrospective study included colorectal cancer patients at the tertiary referral center from April to October 2023 who underwent anterior or low anterior resection (LAR) using a circular stapler. According to energy source, patients were divided into powered and manual groups, which used two powered and four types of manual staplers, respectively. All open, laparoscopic, and robotic approaches were included. Propensity score matching (PSM) analysis was used to reduce selection bias. Postoperative complications within 30 days, especially for anastomosis-related complications, were compared between the groups.

Results

Among 511 patients, the Powered group was 161 (32%). After PSM, 143 pairs of 286 patients were analyzed. The proportions of LAR were 53.8% and 51.0%, and initial diverting stoma rates were 23.1% and 22.4% for the Powered and Manual groups, respectively. Comprehensive complication rates favored the Powered group compared to the Manual group, without statistical significance (13.3% vs. 21.0%, P = 0.063). Anastomotic leakage was not different between the Powered and Manual groups (4.2% vs. 4.9%, P = 0.782). There was no significant difference in other complications, including anastomotic bleeding, ileus, surgical site infection, and intra-abdominal hematoma.

Conclusions

The study implies that powered circular staplers may not significantly reduce postoperative complications, including anastomotic leakages, compared to manual staplers in colorectal surgery of high-volume centers.

P3-20

Unexpected rapid progression and double primary malignancies in an elderly appendicieal cancer patient

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Colorectal cancer diagnosed in the elderly is known to progress relatively slowly. Additionally, small bowel cancer is known to be rare. However, we present a case of a 77-year-old female who was diagnosed with stage I colorectal cancer, which rapidly progressed within one year, and simultaneously identified double primary small bowel cancer. The patient subsequently underwent a right hemicolectomy following the diagnosis of appendiceal cancer, which was identified after a laparoscopic appendectomy for acute appendicitis with a periappendiceal abscess. There was no residual tumor and no lymph node metastasis in any of the 17 examined lymph nodes in the right hemicolectomy specimen. Preoperative work-up showed no distant metastasis, and intraoperative findings showed no peritoneal seeding or metastasis to other organs. Therefore, the final pathological stage of the appendiceal cancer was pT2N0M0. She underwent surveillance with serum CEA every 3 months and abdominopelvic CT scans every 6 months, all of which were within normal range, showing no tumor recurrence or metastasis. However, a colonoscopy performed one year after the diagnosis of appendiceal cancer revealed a 4 cm ulcerofungating tumor located 20 cm above the anal verge, which was histologically confirmed as adenocarcinoma. During the staging workup, PET-CT simultaneously showed hypermetabolism in the sigmoid colon cancer and in the small bowel located in the right lower quadrant. She underwent an anterior resection for the sigmoid colon cancer and a segmental resection of the small bowel for a lesion that had invaded the abdominal wall. Additionally, a 1.0 x 1.0 cm nodule on the uterine fundus, not identified preoperatively, was excised during surgery. The pathological report confirmed double primary cancers, with the sigmoid colon cancer staged as T3N0M1 and the small bowel cancer staged as T4N0M0. This case demonstrates that even elderly cancer patients with initially favorable prognostic factors require comprehensive monitoring

P3-21

Pre-operative endoscopy does not increase the frequency of subtotal or total colectomy in patients presenting emergently with large bowel obstructions

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Background/Aims

In patients presenting with colorectal cancer, obtaining histological confirmation is important. However, safety of undergoing colonoscopy in patients presenting acutely with large bowel obstruction (LBO) is not yet certain. Circumferential colorectal cancer can act as a valve, leading to entrapment of insufflated gas and subsequent caecal dilatation. This study aimed to verify this hypothesis.

Methods

A retrospective review of patients at a single tertiary hospital of patients presenting with acute LBO was performed.

Results

Between 2018 and 2024, 84 patients presented with LBO. 14 (16.7%) presented with benign pathologies such as radiation or diverticular strictures, 70 (83.3%) were presenting with colorectal cancer. 8 (9.5%) patients underwent palliative stenting, 4 (4.7%) patients underwent stenting as a bridge to surgery. 72 (85.7%) patients underwent surgical management with 24 (28.6%) undergoing preoperative endoscopy.

Average caecal diameter at presentation was 71.31mm for those who had pre-resection endoscopy compared to 74mm in those do did not (p=0.35) showing no difference between the two groups.

Of the patients who underwent pre-resection endoscopy, 2 (8.3%) patients required total or subtotal colectomy due to caecal dilatation, 1 (4.1%) patient required a right hemicolectomy as well as an anterior resection for caecal dilatation.

In patients who had upfront surgical resection, 10 (20.8%) required total/subtotal colectomy due to caecal dilatation.There was no statistical difference between the groups (p= 0.31).

Conclusion

Pre-operative endoscopy does not increase the rate of total/subtotal colectomy suggesting caecal dilatation does not occur.

P3-22

Comparative analysis of organ preservation attempt and radical surgery in clinical T2N0 mid to low rectal cancer

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Background

Debate persists regarding the feasibility of adopting an organ-preserving strategy as the treatment modality for clinical T2N0 rectal cancer. This study aimed to compare the outcomes of attempting organ-preserving strategies versus radical surgery in patients with clinical T2N0 mid to low rectal cancer.

Methods:

Patients diagnosed with clinical T2N0 rectal cancer, with lesions located within 8 cm from the anal verge as determined by pre-treatment magnetic resonance imaging between January 2010 and December 2020 were included.

Results

Of 119 patients, 91 and 28 were categorized into the organ-preserving attempt group and the radical surgery group, respectively. The median follow-up duration was 48.8 months (range, 0–134 months). The organ-preserving attempt group exhibited a reduced incidence of stoma formation (44.0% vs. 75.0%; p = 0.004) and a lower occurrence of grade 3 or higher surgical complications (5.8% vs. 21.4%; p = 0.025). Univariate analyses revealed no significant association between treatment strategy and 3-year local recurrence-free survival (organ-preserving attempt 87.9% vs. radical surgery 96.2%; p = 0.129), or 3-year disease-free survival (79.6% vs. 84.9%; p = 0.429). Multivariate analysis did not identify any independent prognostic factors associated with oncologic outcomes.

Conclusions

Compared with radical surgery, attempted organ preservation resulted in lower incidences of stoma formation and severe surgical complications, whereas oncological outcomes were comparable. Attempting organ preservation may be a safe alternative to radical surgery for clinical T2N0 mid to low rectal cancer.

P3-23

Prognostic effect of adjuvant therapy after curative upfront surgery in low-risk pathologic T3N0 rectal cancer

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Background

Clinically early rectal cancer may be confirmed as pathologic T3N0 after upfront surgery. However, the postoperative adjuvant therapies in pT3N0 rectal cancer remain controversial. This study demonstrates the prognostic benefits of adjuvant therapy in pT3N0 low-risk rectal cancer.

Methods

Patients underwent upfront surgery without neoadjuvant therapy for rectal cancer from 2003 to 2021 were reviewed. The pathology reporting T3 lesions without lymph node metastasis (N0) were sorted. The patients were subdivided into two groups: observation and adjuvant (either chemotherapy or radiotherapy) group. The low-risk features included 'upper rectal cancer, well or moderately differentiated carcinoma, and without lymphovascular invasion'. The 5-year recurrence-free survival (5yr RFS) and overall survival (5yr OS) were compared and analyzed.

Results

After upfront surgery, 377 patients were reported with pT3N0 rectal cancer, and 146 (38.7%) of them showed low-risk features. There was no difference in oncologic outcomes between the low-risk patients and non-low-risk patients (5yr RFS, 87.8% vs. 84.7%, p=0.991; 5yr OS, 94.4% vs. 92.3%, p=0.588; respectively). Among the low-risk patients, the 5yr RFS showed no difference between the observation and adjuvant groups (83.1% vs. 86.0%, p=0.212), however, the 5yr OS was higher in the adjuvant group than that of the observation group (87.9% vs. 98.7%, p=0.003). In univariable analysis, adjuvant therapy (p=0.006), diagnosed age (p=0.009), and tumor size (p=0.001) were associated with 5yr OS. After adjustment, the adjuvant therapy in the low-risk pT3N0 rectal cancer showed higher 5yr OS after their surgery (hazard ratio 12.696, 95% confidence interval 1.181-136-543, p=0.036).

Conclusion

The additional treatment after surgery for pT3N0 low-risk rectal cancer may be beneficial in improving survival. Therefore, adjuvant therapy may be recommended for all pT3N0 rectal cancer, regardless of low-risk features.

P3-24

Comparison of the Recurrence Rates Between Endoscopic Resection and Transanal Excision in T1 Rectal Cancer

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Background

In the low rectal cancer, local treatment has been a subject of prolonged debate and considerable challenge. Transanal excision (TAE) has been selectively employed due to concerns regarding recurrence, yet its low complication rates have positioned it as a viable local treatment option. The frequency of endoscopic resection (ER) has risen recently alongside advancements in endoscopic techniques. Therefore, this study aims to compare recurrence rates between ER and TAE.

Methods

We retrospectively reviewed the records of 76 patients with T1 rectal cancer treated at a single center between January 2009 and December 2023. Among them, 49 patients underwent surgery and among the 15 patients who underwent ER, 4 subsequently required additional surgery. Therefore, we compared 11 patients who underwent ER with 12 patients who underwent TAE.

Results

There were no significant differences in sex, age, BMI, or comorbidities between the ER and TAE groups. The mean lesion size was 25.8 mm in the ER group and 24.1 mm in the TAE group. Sessile lesions were present in 81.8% of the ER group, whereas polypoid lesions were observed in 58.3% of the TAE group (p=0.006). The median depth of invasion was 890 (maximum 4894) in the ER group, and 1562 (maximum 3640) in the TAE group.

In the TAE group, two patients experienced recurrence. One was a 55-year-old male who refused surgery despite being eligible due to a 50 mm circumferential lesion, opting instead for TAE. The other was a 66-year-old female who had submucosal invasion measuring 3640. There were no recurrences in the ER group, and there were no statistically significant differences observed compared to TAE.

Conclusions

ER and TAE are effective local treatments for T1 rectal cancer, with comparable outcomes in terms of recurrence. Specific lesion characteristics and patient preferences should guide treatment choice between ER and TAE

P3-25

Young Onset Colorectal Cancer: A Retrospective Analysis on its risk factors and prognosis

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Background

Young onset colorectal cancer (YOCRC), colorectal cancer (CRC) occurring before 50 years old, is increasing worldwide. This study aims to evaluate recent trends on its risk factors and prognosis of YOCRC at a single tertiary center.

Methods

Patients who underwent radical surgery for CRC between 2015 and 2020 were retrospectively collected. Patients who were less than 18 years old, had double primary cancer before the surgery, and had CRC other than adenocarcinoma were excluded.

Results

Among 4,295 patients, 619 and 3,676 were YOCRC and non-YOCRC patients. Median age for each group were 44 and 65. Overall tumor stages were 25.7%, 27.4%, 31.5%, 10.5%, and 5.0% for stages I, II, III, IV and unknown. Patients who were female, current smoker, who had inflammatory bowel disease (IBD), familial history for CRC, who underwent adjuvant therapy, and whose cancer were left sided, lymph node positive, metastatic, high-differentiated, microsatellite instability (MSI)-high were dominant in YOCRC. Median follow-up was 56 months. YOCRC patients had lower disease progression-free survival (PFS) (77.3% vs. 80.7%, P=0.044), but had higher overall survival (88.2% vs. 81.3%, P<0.001) than non-YOCRC patients. In Cox analysis, YOCRC did not affect PFS whereas stoma formation, adjuvant therapy, higher pT, pN, pM, differentiation, positive lymphovascular invasion, and MSI-H were predictive for PFS. In multivariate logistic regression, patients who were female, who had IBD, hereditary syndrome, primary complaint, who did not have diabetes, who underwent emergency operation, adjuvant therapy, and MSI-H were predictive for YOCRC.

Conclusion

YOCRC consist of 15% in all CRC patients and had worse disease progression rate. Patients who has IBD, familial history, and hereditary syndrome should be vigorously monitored for CRC. Further study on tumor mutational analysis for YOCRC would reveal the high incidence of disease progression.

P3-27

Serum glucose variability increases the risk of postoperative complications following colorectal cancer surgery

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Background

Perioperative hyperglycemia has been consistently associated with adverse outcomes. Recently, multiple studies have revealed that high glycemic variability, rather than just hyperglycemia, has a more detrimental impact. However, its impact on postoperative complications following colorectal cancer surgery remains unclear. This study aimed to determine whether serum glucose variability increases the risk of postoperative complications in patients undergoing elective colorectal cancer surgery.

Methods

This retrospective cohort study included 2093 patients who underwent elective colorectal cancer surgery at a tertiary referral hospital from March 2018 to December 2019. The primary obj!ective was to assess the association between serum glucose variability, measured as the coefficient of variation (COV) of glucose levels at predefined time points pre- and post-surgery, and the occurrence of postoperative complications within 30 days.

Results

Patients were divided into three tertiles based on their COV of glucose levels: Tertile 1 (<20%), Tertile 2 (20%-36%), and Tertile 3 (≥36%). The non-diabetic patients in the highest tertile (≥36% COV) had a significantly longer postoperative hospital stay (12.6 ± 12.6 days) and longer operation duration (331.2 ± 189.6 minutes) compared to those in the lowest tertile. Diabetic patients in the highest tertile also showed longer postoperative hospital stays (13.9 ± 14.4 days) and operation durations (319.6 ± 162.4 minutes). Higher glucose variability was significantly associated with an increased risk of postoperative complications. Univariate and multivariate analyses revealed that glucose variability (COV) was an independent risk factor for complications of grade III or higher (Odds Ratio: 1.0374, 95% CI: 1.0203 to 1.0548, $p < 0.0001$). Other significant factors included male sex and type of surgery (open vs. laparoscopic/robotic).

Conclusion

Higher glucose variability was associated with an increased risk of postoperative complications in patients who underwent colorectal cancer surgery. Therefore, close monitoring and management of glucose levels in the perioperative period are recommended.

P3-28

Oncologic outcome of Multiple High-risk Features in Stage II Colon Cancer

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Purpose

Stage II colon cancer with high-risk features (HRFs) had revealed worse oncologic outcome than without HRFs. However, the prognostic value of multiple HRFs(≥2 HRFs) has been poorly studied. This study aimed to analysis the clinical and oncologic outcome stage II colon cancer between low risk, single HRF and multiple HRFs group.

Method

Between March 2006 and Dec 2018, 398 patients who diagnosed stage II colon cancer were retrieved from a retrospective database. 146 patients had no HRF as low risk group. 147 patients had a single HRF(1 HRF) and 105 patients had multiple HRFs(≥2 HRFs) in stage II colon cancer. The clinical characteristics and oncologic outcome were statistically analyzed.

Result

Median follow up was 48 months. The 5-year disease-free survival rate was better in low risk group (89.8%) and single HRF group (91.8%) compared to multiple HRFs group (80.0%, p=0.009). The overall survival rate was not different in three groups (92.4% vs 93.2% vs 88.6%). Recurrence pattern was compared between single HRF and multiple HRFs group. The total recurrence rate was higher in multiple HRFs (20.0%) compared to single HRF (8.2%, p=0.020). The systemic recurrence was more often in multiple HRFs group than single HRF group (14.2% vs 4.7%, p=0.046). In multivariate analysis, prognostic factors included T stage (T3 vs T4) (HR 2.568, 95% CI 1.230-5.359, p=0.012) and multiple HRFs (HR 2.015, 95% CI 1.057-3.839, p =0.033).

Conclusion

Base on present data, multiple HRFs group had worse 5-year disease free survival rate than low risk and single HRF group. Therefore, the stage II colon cancer with multiple HRFs should be considered as more aggressive treatment and closed follow-up.

P3-29

Giant complicated mesenteric lymphangioma causing colonic stenosis: A Case report

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Mesenteric lymphangioma is a very rare intra-abdominal tumor and can cause various clinical symptoms, so careful attention is required for accurate diagnosis. Symptomatic mesenteric lymphangioma may require surgery, and it is important to determine the extent of surgery to ensure maximum functional preservation. A 60-year-old female patient visited another hospital with abdominal pain, weight loss, and poor oral intake that had started 1 month before admission, and was admitted to our hospital with a huge abdominal mass accidentally discovered on abdominal CT. Abdomen MRI performed at our hospital showed about 18 cm mass, center in splenic flexure in mesocolon and A borderline sized left para-aortic lymph node, so malignancy could not be ruled out, and colonoscopy showed that the lumen of the left colon was compressed and the proximal part of the splenic flexure was damaged. Multiple translucent cystic lesions measuring 5-10 cm were observed. On surgical findings, a huge soft tissue mass was observed encircling the left colon, and adhesion with surrounding tissues was very severe, so radical left hemicolectomy and paraaortic lymph node dissection were performed. Histopathological examination revealed a 12.5 x 6.5 cm sized Mesenteric lymphangioma arising in mesocolon and involving colonic wall, and Tumor inflamed and forming partly abscess and fibrotic adhesion. Due to long-term nutritional deficiency, the patient's condition improved after surgery and was discharged after enteral and parenteral nutritional support.

P3-30

Comparison of Sing-port versus Multi-port Surgery for Rectal Cancers: A Single-Center, Randomized Controlled Trial

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Background

It is unknown whether the da Vinci Single-port (SP) system exhibits the same performance as the previous multi-port (MP) system during complicated procedures, such as rectal cancer surgery. Therefore, we conducted a randomized controlled trial to compare the short-term clinical outcomes of SP and MP robotic total mesorectal excision (TME) for the treatment of rectal cancer.

Methods

This study is a prospective, single-center, randomized, controlled open-label trial involving patients diagnosed with adenocarcinoma located <10 cm from the anal verge and clinically rated as T1-3NxM0, who underwent either SP or MP robotic TME. The primary outcome measured was the ideal hospital stay, evaluated based on five recovery criteria. Secondary outcomes included perioperative morbidity, recovery parameters, pathological results, and quality of life. The trial is registered under the number KCT0006007.

Results

A total of 77 patients were eligible for intention-to-treat analysis, with 39 in the SP group and 38 in the MP group enrolled between March 2021 and December 2023. The ideal hospital stay was 4.2±1.5days in the SP group and 4.8±1.7days in the MP group (P=0.105). Intraoperative parameters, including operative time (P=0.338) and estimated blood loss (P=0.730), did not differ between the groups. The Visual Analogue Scale pain score at one day after surgery was significantly lower in the SP group (5.2±1.1 vs. 5.8±1.3, P=0.048). In patients without anastomotic leakage, CRP levels on postoperative day 3 trended to be lower (7.2±3.7 vs. 9.3±5.3 mg/L, P=0.062) in the SP group. The overall postoperative complication rate was 17.9% in the SP group and 23.7% in the MP group (P=0.584). Pathologic outcomes were not different the between groups.

Conclusion

In patients with rectal cancer, SP robotic surgery demonstrated outcomes comparable to those of MP robotic TME. Thus, the SP robot can be considered a viable surgical option for the treatment of rectal cancer.

P3-31

Ambulatory colorectal surgery under ERAS recommendations: clinical outcomes after two years of protocol implementation in a high- complexity institution in Latin America.

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Background (Aims)

Ambulatory colorectal surgery involves discharging patients within 24 hours after major surgeries. Few reports exist in Latin America on its implementation under enhanced recovery after surgery (ERAS) guidelines. This study describes the clinical outcomes of an outpatient colorectal surgery protocol following ERAS after two years in a high-complexity Latin American institution.

Methods

Retrospective descriptive cohort study. The ERAS protocol was implemented in 2022, and patients who completed follow-up by April 2024 were analyzed. Criteria for the institutional ambulatory colorectal surgery protocol included: preoperative counseling for outpatient care, family support, adherence to medical recommendations, and ASA less than 4. Patients with complicated surgeries, perioperative ICU admission, anticoagulation, and high social risk were excluded. Hospital readmissions, complications, or reinterventions were measured up to 30 days post-surgery.

Results

Between 2022 and 2024, 86 patients were treated under ERAS recommendations, of which 11.6% (10/86) met the criteria for the ambulatory colorectal surgery protocol. The median age in this group was 57.5 years (IQR 46.25-68.25), with 80% (8/10) being men. 60% (6/10) underwent anterior rectal resection. Pathology reports showed adenocarcinomas in all cases. The median time to first flatus was 10 hours (IQR 5.5-13.5), and the median time to oral intake tolerance was 6 hours (IQR 4-6). The median hospital stay was 19.5 hours (IQR 9.5-20.75). No hospital readmissions, reinterventions, or other complications were reported within 30 days of follow-up.

Conclusions

Ambulatory colorectal surgery can be safely implemented under ERAS recommendations. Selecting appropriate patients for this outpatient protocol is crucial for achieving favorable clinical outcomes.

P3-32

Exploring role of minimally invasive surgery for maximally invasive rectal cancer.

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Aim

Feasibility of Minimally invasive surgery in locally advanced rectal cancer.

Results

Locally advanced signet ring cell rectal cancer being common in India with incidence upto 20%. These patients often tend to be younger and frequently have lateral nodes. Neo-adjuvant therapy in these cases comprises of short course radiation along with simultaneous integrated boost to lateral nodes (SCRT + SIB) and chemotherapy. In this video we present similar case of 25-year-old male with locally advanced rectal cancer who underwent laparoscopic abdominoperineal resection with prostate shave and bilateral pelvic lymph node dissection post short course radiation and simultaneous integrated boost along with chemotherapy. After initial mesocolic mobilization and Inferior mesenteric artery ligation descending colon is released from lateral attachments. During performance of pelvic lymph node dissection defining pararectal spaces by dissecting ureterohypogastric fascia and vesicohypogastric fascia are initial steps in dissection. Next step is clearance of obturator group of lymph nodes and internal iliac group of lymph nodes. In case of bulky lateral nodes involving internal iliac vessels ligation of these vessels at origin helps to achieve optimal nodal clearance. Reaching up to the lumbosacral trunk while dissecting internal iliac nodes is necessary for adequate clearance. Post SCRT + SIB lateral pelvic node dissection is challenging procedure which is demonstrated in this video. Postoperative patient had uneventful recovery. Histopathology report suggestive of T3 rectal cancer with free circumferential resection margins and 7 out 20 nodes (1 pelvic + 6 mesorectal) involved by the tumour.

Conclusion

Minimally invasive surgery for locally advanced rectal cancer with lateral node dissection can be done safely at high volume centre with good outcome.

P4-02

Darvadstrocel, another form of treatment in the chronic fistulas

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Background

Crohn's Disease (CD) produces intense inflammatory activity which can give rise to severe perianal fistulae. Many fistulae do not respond to currently-available biological therapies, severely compromising patients' quality of life. We propose to treat this kind of patients with Darvadstrocel.

Methods and materials

We selected 5 patients with active, debilitating, anti-TNF-resistant fistulizing CD, to receive treatment with allogenic mesenchymal stem cells (Darvadstrocel).

Results

After 1 year of follow-up in 3 cases, and 1 month in the remaining cases, all patients showed a significant clinical improvement, and in 3 cases, the closure of the fistula.

Conclusion

This initial pilot study shows that for patients with anti-TNF-resistant fistulizing CD, Darvadstrocel may be a valuable therapeutic weapon.

P4-04

Phenylephrine-pramoxine combination for post- hemorrhoidectomy pain

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Background

The challenge of post-hemorrhoidectomy pain, often described as unbearable, significantly undermines patient well-being and satisfaction subsequent to surgical intervention. This substantial discomfort frequently deters individuals from electing to undergo the procedure. The objective of this study is to investigate the efficacy of methylene blue, administered regionally after surgery, in ameliorating post-hemorrhoidectomy pain over an extended period.

Methods

The study population comprised 197 individuals aged between 18 and 75 years, all undergoing LigaSure hemorrhoidectomy for Stage III or IV hemorrhoids. Employing retrospective methodology, this trial contrasted the outcomes of immediate postoperative phenyephrine hydrochloride/pramoxine hydrochloride (Pramofen, Avixa Drug.; Istanbul/Turkiye) application (114 patienst) against those of not used any ointment, which served as the control (83 patients). A follow-up duration of 24th hour; 10th day; 4th week was noted to evaluate pain levels, while statistical analysis was rigorously performed. All procedures adhered to established ethical standards, and the study was duly registered.

Results

Analysis of baseline demographics, surgical parameters, and complications revealed no significant disparities between groups. However, individuals in the intervention cohort exhibited a consistently lower mean pain score up until the 10th day post-surgery. Notably, from days 1 to 7 post-operation, Pramofen group reported significantly reduced pain scores, with no marked differences observed thereafter.

Conclusion

Preliminary findings from this ongoing trial underscore the analgesic effect of pramoxine and anti-edema effect of phenyephrine, specifically when administered via transdermal from wound site itself. The results indicate that phenyephrine-pramoxine is comparably effective in mitigating pain following hemorrhoidectomy, with minimal adverse effects and complications noted. This study contributes valuable insights into post-surgical pain management strategies, suggesting that phenyephrine-pramoxine could offer a viable alternative for pain alleviation post-hemorrhoidectomy.

P4-05

Is the depth of the artery important in Doppler- guided hemorrhoidal artery ligation?

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Aim

Doppler-guided hemorrhoidal artery ligation is an increasingly popular minimally invasive procedure. However, the significance of the depth of the ligated artery is not clearly understood. We aim to evaluate the impact of determining the depth of the artery during hemorrhoidal artery ligation by comparing classic trans-hemorrhoidal dearterialization (THD) with the "Arterial Detection Ligation" (ADL) methods on long-term outcomes.

Methods

Patients diagnosed with stage 3 HD between January 2019 and January 2023 at the General Surgery Clinic of the American Hospital, who underwent only ADL or THD by the same surgical team, were included in the study. Cases with additional surgical interventions (such as fissure/fistula surgery, hemorrhoidectomy, or laser) were excluded from the study.

Results

A total of 408 patients were included in the study, with 298 in the ADL group and 110 in the THD group. While there was no difference in terms of postoperative urinary retention (ADL: 4.7%, THD: 5.5%) and minimal bleeding (ADL: 1.3%, THD: 1.8%), it was found that the rate of tenesmus was significantly higher in the THD group (ADL: 4.3%, THD: 10.9%; p=0.01). The percentage of patients with a verbal pain score of 4 or 5 was 7% in ADL and 9.1% in THD on postoperative day 1, and 3% in ADL and 3.6% in THD on postoperative day 7 (p>0.05). There was no significant difference between the rates of hospital readmission due to complications (ADL: 3.7%, THD: 4.5%) and reoperation (ADL: 1.3%, THD: 1.8%). The long-term follow-up results showed recurrence rates of 6.4% in ADL and 7.2% in THD.

Conclusion

Doppler-guided arterial ligation is a low complication rate and effective method in the surgical treatment of hemorrhoidal disease. While determining the depth of the ligated artery does not affect long-term outcomes, it can reduce the rate of tenesmus in the short term.

P4-06

Strangulated Complete Procidentia in Young Adult Male- A Rare Anorectal Emergency: A Case Report

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Background

Rectal prolapse is an uncommon perineal disease. It is defined as a complete protrusion or intussusception of the rectum through the anus. Rectal prolapse is a rare clinical presentation in males, especially adult males. It is surgically managed by abdominal and perineal surgical approaches. Abdominal approaches are favoured in young adults. This case presentation is of a healthy adult male patient presented with strangulated rectal prolapse in emergency hours managed by the perineal procedure. This anorectal emergency in adult males is rare, and its management during emergency hours needs to be discussed.

Case Presentation

A 39-year-old male presented to the emergency department with complaints of mass per rectum for four years, which was spontaneously reducible but became irreducible in the last 12 hours. He also had a history of faecal incontinence. Physical examination revealed the full thickness, irreducible, edematous, and congested rectal prolapse measuring the size of 10x8x2cm. Our patient underwent the perineal rectosigmoidectomy with anterior and posterior Levatorplasty as the patient had been planned for surgery in emergency settings. Intraoperative findings revealed complete rectal prolapse with redundant sigmoid and edematous mesorectum and colon. In the immediate postoperative period, he got complete continence on the fourth day and was discharged on day five.

Conclusion

Strangulated rectal prolapse presented in emergency hours should always be approached by a perineal technique to avoid soiling of the peritoneal cavity by necrotic tissue. Of the three perineal options, perineal rectosigmoidectomy with Levatorplasty has the longest recurrence-free interval, the lowest overall recurrence rate, and the best effects in relation to incontinence and constipation. It is the surgery of choice for strangulated rectal prolapse, especially in young males, where it provides the advantage of preventing sexual dysfunction by being a perineal approach. It is further advised in patients with a history of faecal incontinence.

P4-07

Laparoscopic Ventral Mesh Rectopexy for Obstructed Defaecation - Does Persistence of Symptoms Correlate to Persistence of Anatomical Abnormality?

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Aim

Laparoscopic Ventral Mesh Rectopexy (LVMR) is known to be the procedure of choice for both obstructed Defecation syndrome (ODS) and Internal Rectal prolapse or intussusception (IRP). Majority of patients who had correct indication will benefit from this operation, but a proportion of these patients will have recurrence of symptoms. Aim of this study is to evaluate postoperative anatomy in patient with recurrent or persistent symptoms after LVMR.

Method

This is a retrospective case series of prospective data, collected as part of routine colorectal surgical practice of a single UK pelvic floor unit., over a period of 8 years. All patients underwent preoperative anorectal physiology (ARP) and defaecography. Data were extracted on background diagnosis, postoperative recovery and outcomes where available, time of recurrence and findings on pre and post operative investigations. Data are presented in a retrospective case series format.

Results

60 patients (54 Females and 6 males) with ODS and IRP underwent LVMR between 2016 and 2024. Median age at operation was 59 (34 – 82). Median length of hospital stay was 1 day. 16% had previous hysterectomy or TVT. Out of 60 patients, 30% of these patients (18 females) had recurrence of symptoms, out of which 9 had repeat ARP and defaecography. The remaining 9 patients had their symptoms treated conservatively. Out of 9 patients of repeat ARP, a persistent degree of intussusception (although less than pre op) was demonstrated in 7 patients (11% of total patients). One patient complained of long term chronic pelvic pain, one had a mucosal fold on posterior rectal wall.

Conclusion

LVMR is an effective treatment for patients with ODS and IRP. Patients with recurrent symptoms are likely to have a residual underlying anatomic abnormality that may still be addressed surgically.

P5-01

Examination and prediction of peristomal skin damage using an AI-empowered model

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Background

Peristomal skin damage is a prevalent complication among patients with stomas. Early intervention in stoma care is crucial for preventing skin damage in high-risk patients. With the advancement of technology, artificial intelligence (AI) based diagnostic imaging has emerged in the medical field. Our research group has been actively involved in AI-based surgical research. We have particularly focused on peristomal skin damage and have developed and evaluated an AI-based image recognition model to predict this condition.

Methods

This study analyzed stoma image records from 25 surgical cases involving colostoma creation at our hospital, spanning from February 2018 to November 2019. We utilized deep learning techniques on stoma photographs to construct a model that predicts the presence or absence of skin damage. The model was built using MATLAB (MathWorks) and a trained neural network. Results were analyzed and visualized using an explainable AI model, which helped in understanding the AI model's decision-making process.

Results

The predictive model achieved a perfect area under the curve (AUC) of 1.0. When applied to early postoperative stoma images, the model demonstrated an AUC of 0.70, with a sensitivity of 86% and a specificity of 87%.

Conclusion

The results suggest that it is feasible to construct a reliable model to predict peristomal skin damage using AI image recognition and explainable AI technologies. This model has the potential to significantly enhance early diagnosis and intervention for stoma patients.

P5-02

Temporary Ileostomy Closure Surgery after Low Anterior Resection for Rectal Cancer: Our Experience

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Background

A temporary protective ileostomy is a frequent procedure during low rectal cancer surgery. The subsequent reversal surgery is not without complications.

Methods

We conducted a retrospective observational study on 100 patients that underwent ileostomy closure surgery after a low anterior resection (LAR) for rectal cancer at the General Surgery Department of Hospital Universitario Marqués de Valdecilla between November 2020 and November 2023.

We analysed demographic variables, variables related to surgical treatment, systemic oncologic treatment, and postoperative complications (graded according to the Clavien-Dindo classification).

Results

Out of 100 patients analysed, 35 presented with postoperative complications, with paralytic ileus being the most common with 10 cases. 10 patients required surgical reintervention (3 due to dehiscence of coloanal anastomosis, 2 due to evisceration, 2 due to bowel obstruction, 1 due to dehiscence of ileoileal anastomosis, 1 due to lower gastrointestinal bleeding, and 1 due to colonic perforation following mesenteric ischemia).

We did not find statistically significant differences in the occurrence of complications in relation to demographic variables, systemic treatment, or surgical technique for the ileoileal anastomosis. Efferent limb stimulation before surgery was analysed, without any significant results reflecting a lower rate of complications.

Patients with a lower time interval between LAR and ileostomy reversal surgery presented with a statistically significant lower rate of serious complications (grade III or higher in the Clavien-Dindo classification) ($p = 0,027$).

Conclusions

Protective ileostomy closure surgery after LAR shows a high rate of complications. Although generally not serious, the rate of surgical reintervention cannot be overlooked. Despite early reversal surgery showing fewer complications, ileostomy creation should be considered exclusively when strictly necessary.

P5-06

Management of Skin tears using Soft Silicone- Coated Wound Contact Layer (Mepitel One).

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The International Skin Tear Advisory Panel (ISTAP) defines a skin tear as “a traumatic wound caused by mechanical force, including the removal of adhesives.” As skin tears occur, they can increase expenses, also causing unnecessary pain and distress for the patient. Appropriate treatment should be applied to promote stable healing. The goals of skin tear treatment are to preserve as much of the skin flap as possible, protect the surrounding tissue, reapproximate the torn flap back in place, and reduce the risk of infection and further injury.

The aim of this study is to investigate the effectiveness of skin tear management using a soft silicone-coated wound contact layer (Mepitel One) on an 88-year-old female patient who developed a skin tear on her left lower arm during tape removal in the emergency room, and an 86-year-old male patient who developed a skin tear on his left lower arm when preventive dressing was removed from his body guard.

According to the ISTAP Skin Tear Classification System, Skin tears classified as type 1 and type 2 were treated by repositioning the flap, applying a contact layer, and using secondary dressings. Dressings were applied twice a week, and the contact layer was maintained for up to seven days with each application.

All cases treated with the contact layer demonstrated stable wound healing within 20 days. Additionally, this dressing method prevented further damage to the surrounding skin and minimized patient discomfort during the dressing changes.

In general, skin tears are preventable, but if they occur, proper management is necessary to optimize wound healing and minimize patient discomfort. For skin tears requiring flap preservation, using a soft silicone-coated wound contact layer to secure the flap and applying secondary dressings can help reduce unnecessary pain and costs, facilitating wound healing without additional damage.

P5-07

Clinical Outcomes and Management Strategies for Postoperative Enterocutaneous Fistulas: A Single-Center Perspective

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Objectives

As a Wound, Ostomy, and Continence Nurse (WOCN), managing enterocutaneous fistulas (ECFs) is a critical and challenging aspect of patient care. This study aimed to evaluate the clinical outcomes of patients experiencing their first postoperative ECFs, highlighting the role of WOCNs in their management.

Methods

A retrospective review of electronic medical records was conducted. Nineteen patients with initial postoperative ECFs, treated at a tertiary university hospital from March 2018 to December 2021, were included. Data on preoperative patient characteristics, pathogenic microorganisms in the ECFs, and clinical outcomes, including mortality, were collected. Additionally, data on WOCN management and intervention strategies were gathered.

Results

The median patient age was 61 years. The most frequent preoperative diagnosis was primary cancer of intra-abdominal solid organs (n=13, 8.4%). Thirteen patients had undergone more than three abdominal surgeries prior to ECF development. The median interval from the last surgery to ECF occurrence was 23 days. Definitive surgery for ECF closure was performed in four patients. Successful ECF closure was achieved in six patients (31.6%), with four managed conservatively and two via surgery. ECF-related mortality was observed in one patient.

Conclusion

This study reports the clinical outcomes of 19 patients with initial postoperative ECFs, managed through either conservative or surgical interventions, highlighting the pivotal role of WOCNs in their care and management. WOCNs played crucial roles in patient education, wound management, nutritional assessment and improvement, and infection prevention. These contributions significantly impacted patient recovery and the success rate of ECF closure. The findings underscore the importance of a multidisciplinary approach in the management of ECF patients and demonstrate the positive impact of WOCN expertise on patient outcomes.