

JSCP-KSCP Symposium Session

■ 2025年11月14日(金) 15:30 ~ 16:30  第10会場

[JKS1] JSCP-KSCP Symposium Session 1 Front Line of Rectal Cancer Treatment

Moderator:Takashi Akiyoshi(Gastroenterological Surgery, The Cancer Institute Hospital of JFCR), Seok-Hwan Lee(Kyung Hee University Hospital at Gangdong)

[JKS1-1]

The Role of MRI in the Preoperative Diagnosis for Rectal Cancer

Kazushige Kawai, Daisuke Nakano, Misato Takao, Hiroki Kato (Tokyo Metropolitan Cancer and Infectious Diseases Center, Komagome Hospital)

[JKS1-2]

The Latest Preoperative Treatment for Locally Advanced Rectal Cancer and its Pros and Cons

Seung-Bum Ryoo (Seoul National University Hospital)

[JKS1-3]

The Benefits of Upfront Surgery for Locally Advanced Rectal Cancer

Akio Shiomi (Division of Colon and Rectal Surgery, Shizuoka Cancer Center)

[JKS1-4]

Robotic Surgery and Laparoscopic Surgery for Rectal Cancer: Advancing the Front Line of Treatment

Songsoo Yang (Ulsan University hospital)

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[JKS1-1] The Role of MRI in the Preoperative Diagnosis for Rectal Cancer

Kazushige Kawai, Daisuke Nakano, Misato Takao, Hiroki Kato (Tokyo Metropolitan Cancer and Infectious Diseases Center, Komagome Hospital)

Local recurrence after rectal cancer surgery can occur in two distinct forms: central pelvic recurrence and lateral pelvic recurrence, and even after chemoradiotherapy (CRT), residual metastatic lateral lymph nodes may result in lateral pelvic recurrence.

We conducted a nationwide prospective study to determine the optimal indication for the lateral lymph node dissection (LLND) by preoperative MRI, which included 337 rectal cancer patients who underwent TME plus LLND. We developed the criteria using the initial 212 patients, and validated them using the remaining 125 patients. Through this study, we could establish criteria for LLND which could be applied to all patients without preoperative treatment, with neoadjuvant chemotherapy (NAC), and with CRT, as follows;

1. Small nodes; <3.5 mm in long axis
2. Rod-shaped nodes; short/long ratio <0.5
3. Oval nodes of intermediate size; <7 mm in long axis and short/long ratio <0.7

I'll also show the result of other sub-analyses of the study, including the development of two AIs for the determination of lateral lymph node metastasis.

In addition, I'll overview of the published studies investigating the diagnostic accuracy of MRI for lateral lymph node metastasis.

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[JKS1-2] The Latest Preoperative Treatment for Locally Advanced Rectal Cancer and its Pros and Cons

Seung-Bum Ryoo (Seoul National University Hospital)

Neoadjuvant long-course chemoradiotherapy (CRT) followed by total mesorectal excision (TME) and adjuvant chemotherapy has been the standard treatment for locally advanced rectal cancer (LARC). This multimodal approach, established through landmark European and German trials, significantly reduced local recurrence and improved survival outcomes. However, despite local recurrence rates as low as 5-8% in modern practice, distant metastasis remains a major cause of treatment failure, with 10-year cumulative incidence approaching 30%. Adjuvant fluoropyrimidine-based chemotherapy failed to adequately prevent distant relapse, partly due to poor compliance and delayed initiation after CRT. To overcome these limitations, the concept of total neoadjuvant therapy (TNT) has emerged, aiming to deliver systemic chemotherapy earlier to eradicate micrometastases and increase pathologic complete response (pCR) rates. Recent randomized trials have demonstrated the benefits of TNT. The STELLAR and RAPIDO trials showed that short-course radiotherapy followed by CAPOX improved pCR and disease-related treatment failure compared with conventional CRT. The PRODIGE 23 trial using FOLFIRINOX followed by CRT significantly improved 3-year disease-free survival and doubled the pCR rate. These advances highlight TNT as a promising strategy for both oncological control and organ preservation. Nevertheless, the optimal regimen for standard-risk LARC remains unsettled. Key questions include the choice between short- and long-course radiotherapy, induction versus consolidation chemotherapy sequencing, and appropriate chemotherapy intensity. Ongoing randomized trials are expected to clarify these issues and establish a new standard of care.

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[JKS1-3] The Benefits of Upfront Surgery for Locally Advanced Rectal Cancer

Akio Shiomi (Division of Colon and Rectal Surgery, Shizuoka Cancer Center)

Robot-assisted surgery is a promising modality with high degrees of freedom and tremor suppression capabilities, making it a potentially more precise approach than conventional laparoscopic surgery.

In Japan, the number of robot-assisted procedures for rectal cancer has rapidly increased since national insurance coverage was introduced in 2018. Studies using large-scale domestic databases have demonstrated a reduction in the conversion rate to open surgery compared to laparoscopic surgery. Additionally, randomized controlled trials from overseas have shown that robot-assisted surgery facilitates more reliable achievement of a negative circumferential resection margin (CRM).

In 2022, insurance coverage was extended to colon cancer. Evidence from domestic multicenter prospective studies has confirmed the usefulness of robot-assisted surgery, particularly in terms of reducing conversion rates and postoperative complications.

Since 2023, new surgical robotic systems have been launched by various manufacturers, increasing the range of available options.

Reflecting these developments, the 2024 edition of the Japanese Guidelines for the Treatment of Colorectal Cancer strongly recommends robot-assisted surgery as a treatment option for rectal cancer, and weakly recommends it for colon cancer.

At our department, we have performed over 1,800 robot-assisted surgeries for colorectal cancer since 2011. In this presentation, we will highlight our outcomes-particularly under the principle of upfront surgery - and discuss the current status and future perspectives of robot-assisted surgery.

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[JKS1-4] Robotic Surgery and Laparoscopic Surgery for Rectal Cancer: Advancing the Front Line of Treatment

Songsoo Yang (Ulsan University hospital)

Background: Rectal cancer surgery has evolved significantly over the past two decades, with minimally invasive techniques such as laparoscopic and robotic surgery becoming standard approaches in many centers. While laparoscopic surgery has demonstrated oncologic safety and functional benefits compared to open surgery, robotic platforms have offered enhanced dexterity, stable 3D vision, and improved ergonomics - particularly advantageous in the narrow pelvic cavity.

Content: We will compare laparoscopic and robotic approaches for rectal cancer, reviewing the current evidence on short- and long-term outcomes, including oncologic safety, postoperative recovery, and functional preservation. Although high-quality randomized controlled trials (RCTs) directly comparing these modalities remain limited, multiple observational studies suggest that robotic surgery may reduce conversion rates, facilitate total mesorectal excision quality, and improve postoperative urinary and sexual function. In addition, recent advances in Single-Port (SP) robotic surgery have introduced new possibilities for rectal cancer treatment. Early clinical experiences indicate that SP robotic platforms may further minimize surgical trauma, improve cosmesis, and maintain oncologic principles, while potentially enhancing recovery. Although robust evidence from RCTs is not yet available, initial results are promising and suggest that SP robotic surgery could play a significant role in the next phase of minimally invasive rectal cancer surgery.

Conclusion: As technology advances, the role of robotic surgery - including SP platforms - continues to expand in rectal cancer treatment. Careful evaluation of ongoing and future studies will be essential to define their position at the frontline of surgical management.