



# Which patients with gastric cancer should be candidates for Enhanced Recovery After Surgery protocols?

Kyo Young Song

Department of Surgery, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

The application of Enhanced Recovery After Surgery (ERAS) protocols for the various cancer surgeries is increasing. ERAS program is introduced to reduce surgery stress, accelerate the average length of postoperative functional recovery, and lower postoperative morbidity. The application of the ERAS protocols for gastric cancer has been assessed in several studies, and it has been reported that the ERAS protocol significantly improves recovery time in gastrectomy patients without significantly affecting complications.

**Keywords:** Stomach neoplasms, Enhanced Recovery After Surgery, Compliance

**Received** November 30, 2021

**Revised** December 2, 2021

**Accepted** December 2, 2021

## Corresponding author

Kyo Young Song  
Department of Surgery, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, 222 Banpo-daero, Seocho-gu, Seoul 06591, Korea  
Tel: +82-2-2258-6238  
Fax: +82-2-595-2822  
E-mail: skygs@catholic.ac.kr, skygs9615@gmail.com  
ORCID:  
<https://orcid.org/0000-0002-5840-1638>

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Enhanced Recovery After Surgery (ERAS) protocols are multi-disciplinary perioperative care protocols offered for minimizing postoperative stress and accelerating recovery [1]. They include preoperative counselling, reduced fasting times, avoidance of bowel preparation, optimized anesthesia protocols, use of multi-modal anesthesia, avoidance of nasogastric tubes and intra-abdominal drains, early mobilization, and early progression to food [2]. ERAS protocols reportedly improve postoperative recovery in many abdominal surgeries, especially in colorectal surgery [3].

A 2014 consensus guideline for ERAS in gastric surgery provided advice for components of an ERAS program, but noted the scarcity of evidence including high-quality randomized controlled trials (RCTs) and the need for further research [1]. Since then, numerous studies evaluating the use of ERAS in gastric

cancer surgery have emerged, including a substantial number of RCTs.

Recently, a meta-analysis of RCTs has been published [4]. ERAS significantly reduced the length of stay, reduced hospital costs, and reduced times to first flatus, defecation, ambulation, and oral intake. ERAS had significantly lower rates of pulmonary infections, but not surgical site infections, anastomotic leaks, or postoperative complications. However, ERAS significantly increased readmissions. The most important components of ERAS protocols are still unclear due to a lack of evidence supporting individual components of ERAS in the gastric cancer surgery, and ERAS protocols varied across studies.

Kang et al. [5] performed an RCT and reported that the ERAS protocol significantly improves recovery time in laparoscopic

distal gastrectomy patients without significantly affecting complications, readmission, and mortality. Furthermore, they had an interesting study [6] examining the actual compliance rate of the ERAS and to identify the risk factors for noncompliance with their own ERAS protocols.

In this study, the compliance rate with ERAS protocols was only 32.2%. Risk factors for noncompliance were higher American Society of Anesthesiologists physical status classification, age over 70 years, longer operation time over 180 minutes, and advanced pathologic stage. They concluded that their ERAS protocols should be applied to patients without risk factors. While these results are predictable, they indicate the need to clarify the patient population for which meaningful benefits can be attributed.

Future trials investigating ERAS should investigate the outcomes of individual components of ERAS protocols or implement a homogenous protocol while emphasizing and reporting protocol compliance as well as further details, including reasons for readmissions and resulting healthcare costs.

## NOTES

### Conflict of interest

The author has no conflicts of interest to declare.

### Funding/support

None.

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