ENHANCED RECOVERY AFTER SURGERY
ERAS
Education—Counseling
Prehabilitation

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• ERAS programs typically include multidisciplinary and multimodal interventions aimed at minimizing the physiologic changes associated with surgery.

• Patient benefits
Early removal of catheters

Early oral nutrition

Audit of compliance

Preadmission counseling

No bowel preparation
Carbohydrate loading

No premedication
No nasogastric tubes

Regional Anesthesia

Non-opioid Analgesia

Fluid management

Early mobilization

Non-opiate oral analgesics

Prevention of nausea and vomiting

Warm air body heating

Short incisions, No drains

PostOp

PreOp

IntraOp

ERAS


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ABSTRACT

Background: This is the first updated Enhanced Recovery After Surgery (ERAS®) Society guideline pertaining to optimal perioperative care in gynecologic/oncology surgery.

Methods: A database search of publications using Embase and PubMed was performed. Studies on each item within the ERAS gynecologic/oncology protocol were selected with emphasis on meta-analyses, randomized controlled trials, and large prospective cohort studies. These studies were then reviewed and graded according to the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) system.

Results: All recommendations on ERAS protocol items are based on available evidence. The level of evidence for each item is presented accordingly.

Conclusions: The updated evidence base and recommendations for items within the ERAS gynecologic/oncology perioperative care pathway are presented by the ERAS® Society in this consensus review.

Methods


Received 12 February 2019, Accepted 18 October 2019

Objective: To develop evidence-based guidelines for the optimal perioperative management of patients undergoing emergency laparotomy for gynecologic/oncologic indications.

Methods: A systematic literature search was conducted using PubMed and Embase. The literature was critically evaluated using a modified GRADE approach to establish recommendations. All recommendations were based on the level of evidence available for each item.

Results: The recommendations cover preoperative, intraoperative, and postoperative phases. They are designed to optimize outcomes, reduce complications, and improve patient satisfaction.

Conclusions: The guidelines provide a framework for the optimization of perioperative care in the setting of emergency laparotomy for gynecologic/oncologic conditions.
ERAS protocols in general, focuses on optimizing patient education and perioperative expectations:

- Decreasing the perioperative fasting period
- Euvolemia and normothermia
- Increasing mobilization
- Providing multimodal pain relief
- Providing multimodal nausea and vomiting prophylaxis
- Decreasing unnecessary or prolonged use of catheters and drains
<table>
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<td>- Smoking cessation four weeks preoperatively</td>
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<td>- Alcohol cessation four weeks preoperatively as indicated</td>
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<td>- Avoidance of mechanical bowel preparation preoperatively</td>
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<td>- Ingestion of clear fluids up to two hours prior to anesthetic induction</td>
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Patient education

*Preoperative education sets patient expectations for the surgery and recovery process, which may in turn reduce fear, fatigue, and pain while increasing early discharge.
• Many postoperative problems can be anticipated preoperatively, and eliminated or minimized;
• systematically addressing these issues at the preoperative evaluation may result in a shorter hospitalization with fewer complications and a more satisfied patient.
• The surgeon may also rethink the aggressiveness and necessity of a planned operative procedure after thoughtful discussion with patients who have severe medical problems.
• As an example, a woman with symptomatic congestive heart failure and uterine procidentia may be better served with a pessary than by vaginal hysterectomy and sacrospinous suspension.
Pre-admission Information, Education, Counseling

• The goal of pre-operative counseling is to set expectations about surgical and anesthetic procedures, as well as provide information regarding a care plan in the post-operative period.

• Pre-operative education and psychological preparation can reduce anxiety and increase patient satisfaction, which may improve fatigue and facilitate early discharge.

• Pre-operative education is also effective in reducing pain and nausea, and improving well-being when added to an existing ERAS protocol.

• Written information was determined to be superior to verbal in one randomized clinical trial in gynecologic oncology surgery.
Pre-admission Information, Education, Counseling

• Ideally, patients should receive information in both written and oral form.

• The patient and a relative or care provider should meet with all members of the team including the surgeon, anesthetist, dietician, and nurse.

• Studies have shown that patients with gynecologic cancer prefer to be well informed, and support from a nurse at the time of diagnosis can reduce stress levels for up to 6 months.
• Interventions and endpoints in this field vary widely. However, most studies show that counseling provides beneficial effects with no evidence of harm.

• It is recommended that patients should routinely receive dedicated pre-operative counseling.

• Evidence level: moderate

• Recommendation grade: strong
Prehabilitation

Cancer prehabilitation has been defined as "a process on the continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment, includes physical and psychological assessments that establish a baseline functional level, identifies impairments, and..."
Prehabilitation ....

There is currently no consensus-based definition, but a multimodal approach that encompasses the following principles is gaining popularity:

1- Aerobic and resistance exercises to improve physical function, body composition, and cardiorespiratory fitness
2- Targeted functional exercises to minimize/prevent impairments
3- Dietary interventions to support exercise-induced anabolism as well as mitigate disease and/or treatment-related malnutrition
4- Psychological interventions to reduce stress, support behavior change, and encourage overall well-being
Prehabilitation......

• Few gynecologic prehabilitation studies have been conducted, and available studies have focused exclusively on pre- and post-operative functional exercises with conflicting results:

• Studies for multimodal prehabilitation before surgery in other abdominal cancers have shown a positive impact on patient outcomes.

• A meta-analysis in colorectal surgery found that nutrition prehabilitation with and without exercise shortened length of hospital stay by 2 days in a largely traditional (ie, non-ERAS) surgical care setting.
Prehabilitation.....

• A meta-analysis of prehabilitation interventions consisting of inspiratory muscle training, aerobic exercise, and/or resistance training found that prehabilitation decreased post-operative complications after intra-abdominal operations in a traditional surgical care setting (OR 0.59, 95% CI 0.38 to 0.91; p=0.03).

• Small prospective trials suggest that trimodal prehabilitation (exercise, nutrition, and anxiety-reduction elements) facilitates an earlier return to functional walking capacity after surgery for colorectal surgery in excess of what is achieved when ERAS is implemented alone.
Prehabilitation....

• It is likely that patients with impaired pre-operative function will attain the greatest clinical benefit.
• A patient-led qualitative study suggested that patients perceived an enhanced recovery program should not be limited to the perioperative period, but should rather encompass the cancer care journey beginning at diagnosis.
• The addition of prehabilitation to the ERAS pathway, might, therefore, confer complementary patient-oriented and functional benefits.
Prehabilitation....

• There are no high quality studies for prehabilitation in gynecologic oncology patients.

• Extrapolated work in colorectal surgery shows certain patients benefit clinically from prehabilitation but further work in gynecologic oncology is needed.

• Evidence level: low

• Recommendation grade: weak