ESGO
European Society of Gynaecological Oncology

25th European Congress on Gynaecological Oncology
March 7-10, 2024 | Barcelona, Spain

Patient Advocacy Seminar - Guidelines

PRE Helps RE - Guidelines of Prehabilitation

Date: 9th March 2024
Name: Christina Fotopoulou, London, UK

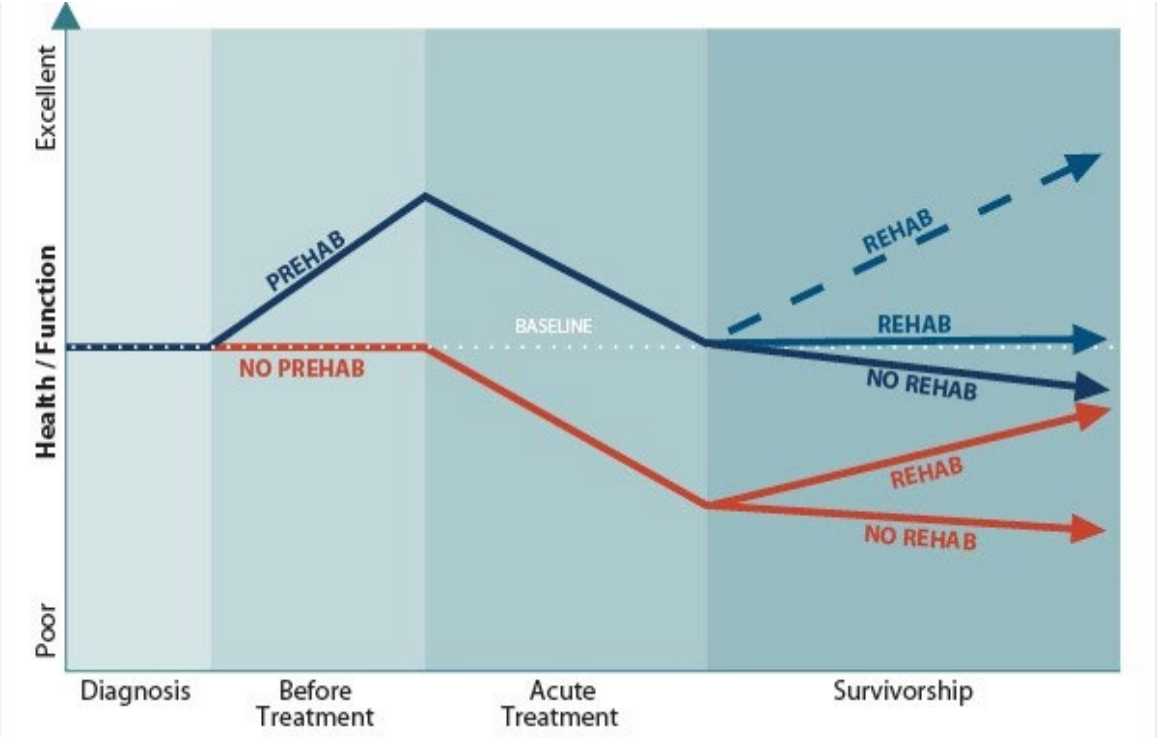
Declaration of interests

Honoraria received for advisory boards from: AZ, MSD, Roche, GSK, Oncoinvent.

Marathon des Sables: 230km Ultramarathon

Manageable without Preparation?

Surgery is also nothing else than a journey…



Annals of Surgery. 267(1):50–56, JAN 2018
DOI: 10.1097/SLA.0000000000002293, , PMID: 28489682
Issn Print: 0003-4932
Publication Date: 2018/01/01

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Personalised Prehabilitation in High-risk Patients Undergoing Elective Major Abdominal Surgery: A Randomized Blinded Controlled Trial

Anael Barberan-Garcia; Marta Ubré; Josep Roca; Antonio M. Lacy; Felip Burgos; Raquel Risco; Dulce Momblán; Jaume Balust; Isabel Blanco; Graciela Martínez-Pallí

- Prehab. has positive effects on pt. Fitness and healthcare status
- RCT evaluating 70 pt. At high risk (age >70, major cancer surgery)
- Number and rate of postoperative complications was reduced by 51%!
- Complications: severe hemorrhage, paralytic ileus, SSI, anastomotic breakdown
- Authors conclude that Prehab should be a „core intervention“ in high risk pt. undergoing major abd. surgery

Clinical Rehabilitation 2011; 25: 99–111

The effects of preoperative exercise therapy on postoperative outcome: a systematic review

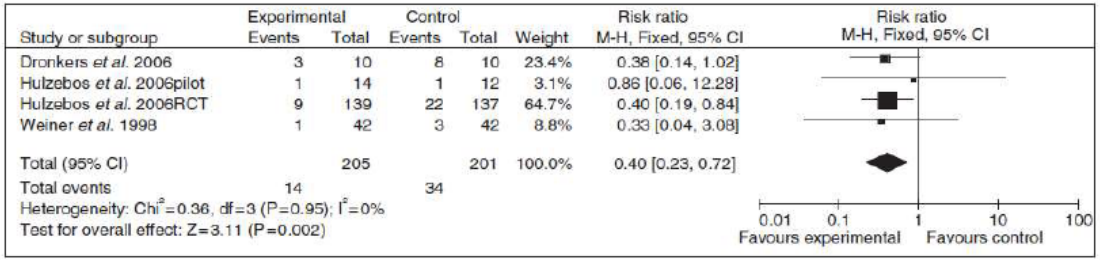


Figure 2 Effect of preoperative inspiratory muscle training on postoperative pulmonary complications after cardiac or abdominal surgery.

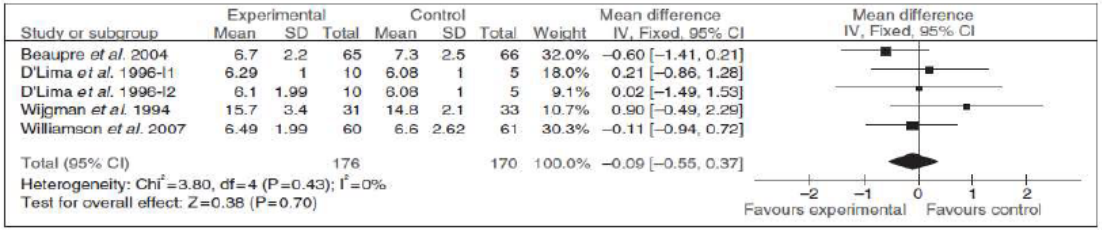


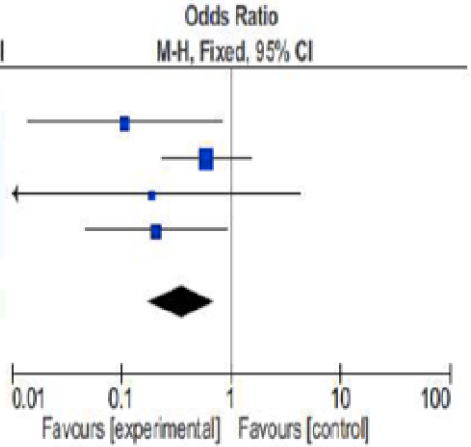
Figure 4 Effect of preoperative exercise therapy on length of hospital stay after joint replacement surgery.

The ability of prehabilitation to influence postoperative outcome. Systematic review and meta analysis

Study or Subgroup	Experimental Events	Experimental Total	Control Events	Control Total	Weight	Odds Ratio M-H, Fixed, 95% CI
Barbalho-Moulim 2011	0	15	0	17		Not estimable
Dronkers 2008	3	10	8	10	20.7%	0.11 [0.01, 0.84]
Gillis 2014	12	38	17	39	42.5%	0.60 [0.24, 1.52]
Kulkarni 2010	0	18	2	19	8.8%	0.19 [0.01, 4.22]
Soares 2013	5	16	11	16	28.0%	0.21 [0.05, 0.92]
Total (95% CI)		97		101	100.0%	0.35 [0.17, 0.71]
Total events	20		38			

Heterogeneity: $Chi^2 = 3.16$, $df = 3$ ($P = 0.37$); $I^2 = 5\%$

Test for overall effect: $Z = 2.94$ ($P = 0.003$)



Prehabilitation vs usual care: morbidity

Surgery, 2016

Frailty Index for prediction of surgical outcome in ovarian cancer: Results of a prospective study

Melisa Guelhan Inc et.al. Gynecol Oncol 2021

1. Prospective trial for patients undergoing cytoreductive surgery in advanced ovarian cancer
2. Evaluation of frailty index in 144 patients, endpoint severe postoperative complications

Highlights

••Frailty Index >0.26 is associated with severe postoperative complications in patients with ovarian cancer.

••Frailty Index can help surgeons to estimate the risk of postoperative complications in ovarian cancer.

••Besides tumor residuals and low albumin levels a Frailty Index >0.15 predicts poor survival in patients with ovarian cancer.

Timed “Up and Go” >9.5 sec

Area	Std. Errora	Asymptotic Sig.	Asymptotic 95% Confidence Intervall Lower Bound	Asymptotic 95% Confidence Intervall Upper Bound
0.70	0.05	0.001	0.60	0.801

Hand Grip Test <20 kg

Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval Lower Bound	Asymptotic 95% Confidence Interval Upper Bound
0.59	0.06	0.12	0.48	0.71

ROC, Receiver Operator Characteristic; AUC, Area Under the Curve

Table 3
Multivariable logistic regression for frailty index adjusted to age > 65 years, Age > 70 years, ECOG, surgical complexity score, recurrent surgery.

	Adjusted OR (95%CI)	*P*-value
Frailty index >0.26	3.64 (1.34–9.85)	0.01
ECOG PS > 1	6.33 (1.31–30.51)	0.02
Recurrent surgery	3.05 (0.98–9.47)	0.05
Surgical complexity score intermediate	6.72 (1.60–28.28)	0.009
Surgical complexity score high	8.86 (1.88–41.76)	0.006

OR, odds ratio; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance status.
* Multivariable logistic regression analyses stepwise forward.

Table 4
Multivariable Cox regression for frailty index (<0.15) related to overall survival adjusted to age > 65 years, advanced figo stage, ECOG, albumin, surgical complexity score and residual tumor.

Variable	Multivariable Adjusted HR (95% CI)	*p*-value
Frailty index<0.15	1.87 (1.01–3.47)	0.048
Albumin<35.5 g/dl	1.92 (1.08–3.43)	0.03
Residual tumor <1 cm	2.75 (1.53–4.96)	0.001
Residual tumor >1 cm	5.00 (2.74–9.13)	<0.001

HR, hazard ratio; CI, confidence interval.
* Multivariable logistic regression analyses stepwise forward.

- strong association between preoperative „frailty“ and surgical morbidity

- assoociation with poor overall survival

- besides frailty, low albumin and postoperative residuals are risk factors

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Guidelines for perioperative care in gynecologic/oncology: Enhanced Recovery After Surgery (ERAS) Society recommendations—2019 update FREE

PDF

Gregg Nelson[1], Jamie Bakkum-Gamez[2], Eleftheria Kalogera[3], Gretchen Glaser[4], Alon Altman[5], Larissa A Meyer[6], Jolyn S Taylor[7], Maria Iniesta[6], Javier Lasala[8], Gabriel Mena[8], Michael Scott[9], Chelsia Gillis[10], Kevin Elias[11], Lena Wijk[12], Jeffrey Huang[13], Jonas Nygren[14], Olle Ljungqvist[15], Pedro T Ramirez[16] and Sean C Dowdy[17]

Author affiliations +

Abstract

Background This is the first updated Enhanced Recovery After Surgery (ERAS) Society guideline presenting a consensus for 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 best available evidence. The level of evidence for each item is presented accordingly.

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

Guidelines for perioperative care in gynecologic/oncology: Enhanced Recovery After Surgery (ERAS) Society recommendations—2019 update

Int J Gynecol Cancer 2019;**0**:1–18. doi:10.1136/ijgc-2019-000356

Gregg Nelson,[1] Jamie Bakkum-Gamez,[2] Eleftheria Kalogera,[3] Gretchen Glaser,[4] Alon Altman,[5] Larissa A Meyer,[6] Jolyn S Taylor,[7] Maria Iniesta,[6] Javier Lasala,[8] Gabriel Mena,[8] Michael Scott,[9] Chelsia Gillis,[10] Kevin Elias,[11] Lena Wijk,[12] Jeffrey Huang,[13] Jonas Nygren,[14] Olle Ljungqvist,[15] Pedro T Ramirez,[16] Sean C Dowdy[17]

Table 1 Differences in quality of evidence and recommendation grade between the 2016 and current updated guideline

ERAS item	Guidelines 2019 versus 2016
Preadmission information, education and counseling	The same recommendation grade but stronger quality of evidence (from low level to moderate)
Prehabilitation	New for 2019 guideline

Summary and Recommendation:
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

The concept of prehabilitation: "a process on the continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment"

Prehabilitation includes:

- ✓ physical and psychological assessments that establish a baseline functional level

identifies impairments

- ✓ provides targeted interventions that improve a patient's health to reduce the incidence and the severity of current and future impairments

Prehabilitation aims to:

- ✓ optimize patients' physical and mental well-being in anticipation of an upcoming stressor rather than a reactive process in which care is provided to restore wellness (ie, rehabilitation)

What does prehabilitation really include?

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.

Targeted Exercise Program

Intervention

Functional exercise programm consisting of:

- Body weight resistance program, targeting all major muscle groups
- Breathing exercises for improved lung capacity
- Relaxation exercises

Additional Recommendation:

Aerobic exercise 3x per week

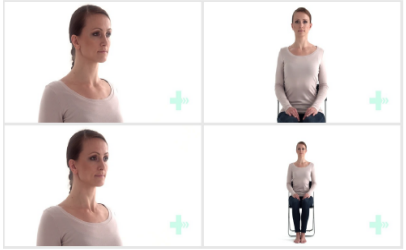
2 Sätze / 20 Wiederh. / 0.5kg Gewicht

1. Ellenbogenflexion mit Gewicht - Bizepscurl

Sitzen Sie aufrecht. Halten Sie ein Gewicht, mit der Handfläche nach vorne, in der Hand. Lassen Sie den Oberarm angelegt und heben Sie das Gewicht bis zur Schulter. Senken Sie das Gewicht wieder ab und wiederholen Sie die Übung.

Alternativ können Sie die Übung auch mit kleinen Wasserflaschen machen.

Legen Sie sich mit angewinkelten Beinen und aufgestellten Füßen auf den Rücken. Legen Sie die Hände auf die unteren Rippenbögen. Atmen Sie nun tief in Ihre gesamte Lunge ein. Die Rippen weiten sich unter Ihren Händen und ihr Bauch wird sich aufblähen. Atmen Sie aus und spannen Sie die Bauchmuskulatur etwas an, um die Lunge komplett zu leeren. Wiederholen Sie diese Übung und halten Sie den Nacken und die Schultern während der Atmung entspannt.



2. Progressive Muskelentspannung des oberen Rückens und der Schultern

Drücken Sie Ihre Schulterblätter nach hinten und unten. Spüren Sie die Spannung in der Muskulatur. Halten Sie die Position für 5 Sekunden, entspannen Sie 15 Sekunden und spüren Sie, wie die Spannung aus den Muskeln verschwindet.

Nutrition Intervention

Intervention:

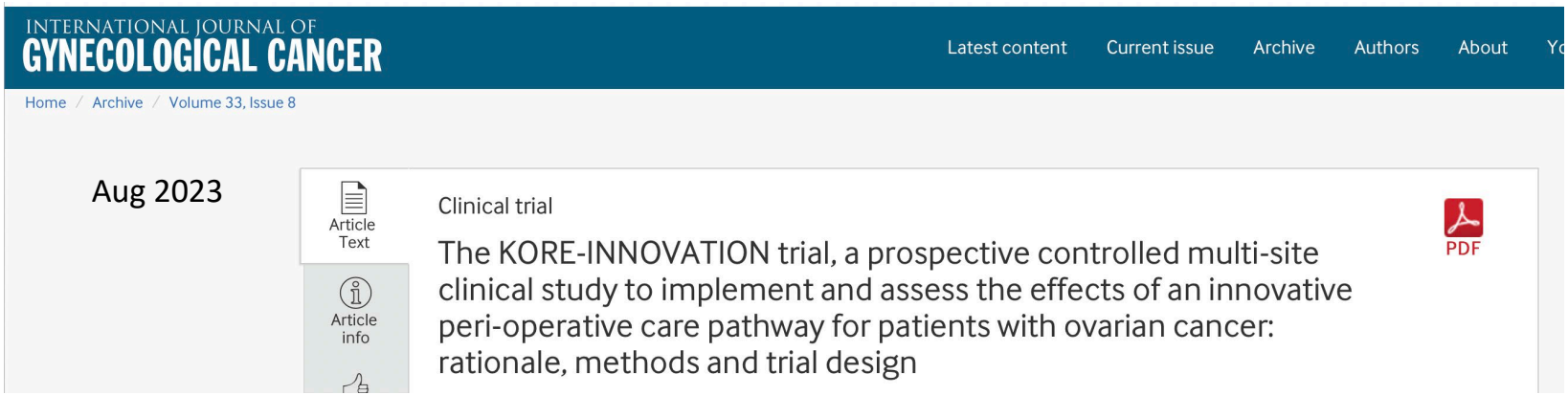
- Food First approach with a recommendation for energy-dense food and food, which is rich in protein.
- Determining the need for oral or parenteral supplements
- Pre-operative Carboloading (ProvideXtra)

Mental Health/ Empowerment

- Individual Coaching Sessions
- Group Coaching Sessions 1x/ week
- Education
- Relaxation techniques/ exercises
- Surgical Step

Preoperative optimization

- Correct anemia (transfusion)
- Protein drinks
- Maintain physical activity
- If patient has symptomatic ascites or pleura effusion then drain and replace with iv fluids accordingly (if theatre date not immediate)
- **Psychooncological/ CNS support**



Melisa Guelhan Inci, Jalid Sehouli, Eva Schnura, Marlene Lee, Stephanie Roll, Thomas Reinhold, Julia Klews, Lutz Kaufner, Phil Niggemann, Harald Groeben, Julia Toelkes, Anett Reisshauer, Max Liebl, Enrico Daehnert, Manuela Zimmerman, Barbora Knappe-Drzikova, Susanne Rolker, Björn Nunier, Engi Algharably, Adak Pirmorady Sehouli, Lena Zwantleitner, Andrea Krull, Florian Heitz, Beyhan Ataseven, Radoslav Chekerov, Philipp Harter, Stephanie Schneider.

- ✓ Large prospectively RCT with **414 pat** with advanced OC
- ✓ The intervention group receives an additional multi-level study treatment: (1) standardized frailty assessment followed by (2) a personalized tri-modal pre-habilitation program and (3) peri-operative care according to an ERAS pathway.
- ✓ Recruitment to be completed in 2024

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thank you

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