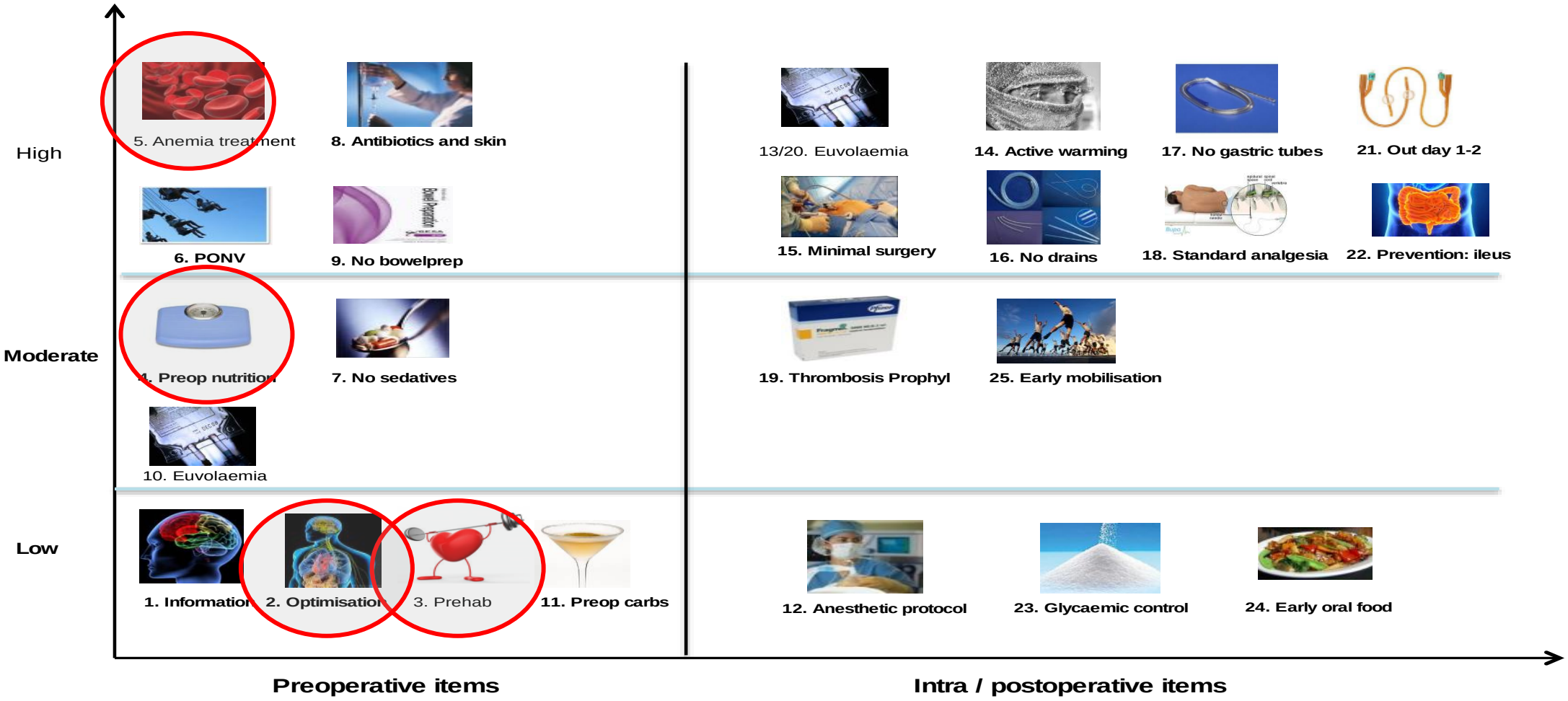
PREHABILITERING / PREOPERATIV MULTIMODAL OPTIMERING

Ulf Gustafsson
Karolinska

ERAS-ITEMS AND EVIDENCE LEVEL

Grading of Recommendations, Assessment, Development and Evaluation (GRADE) system



BAKGRUND

Sveriges Kommuner och Regione

Socialstyrelsen

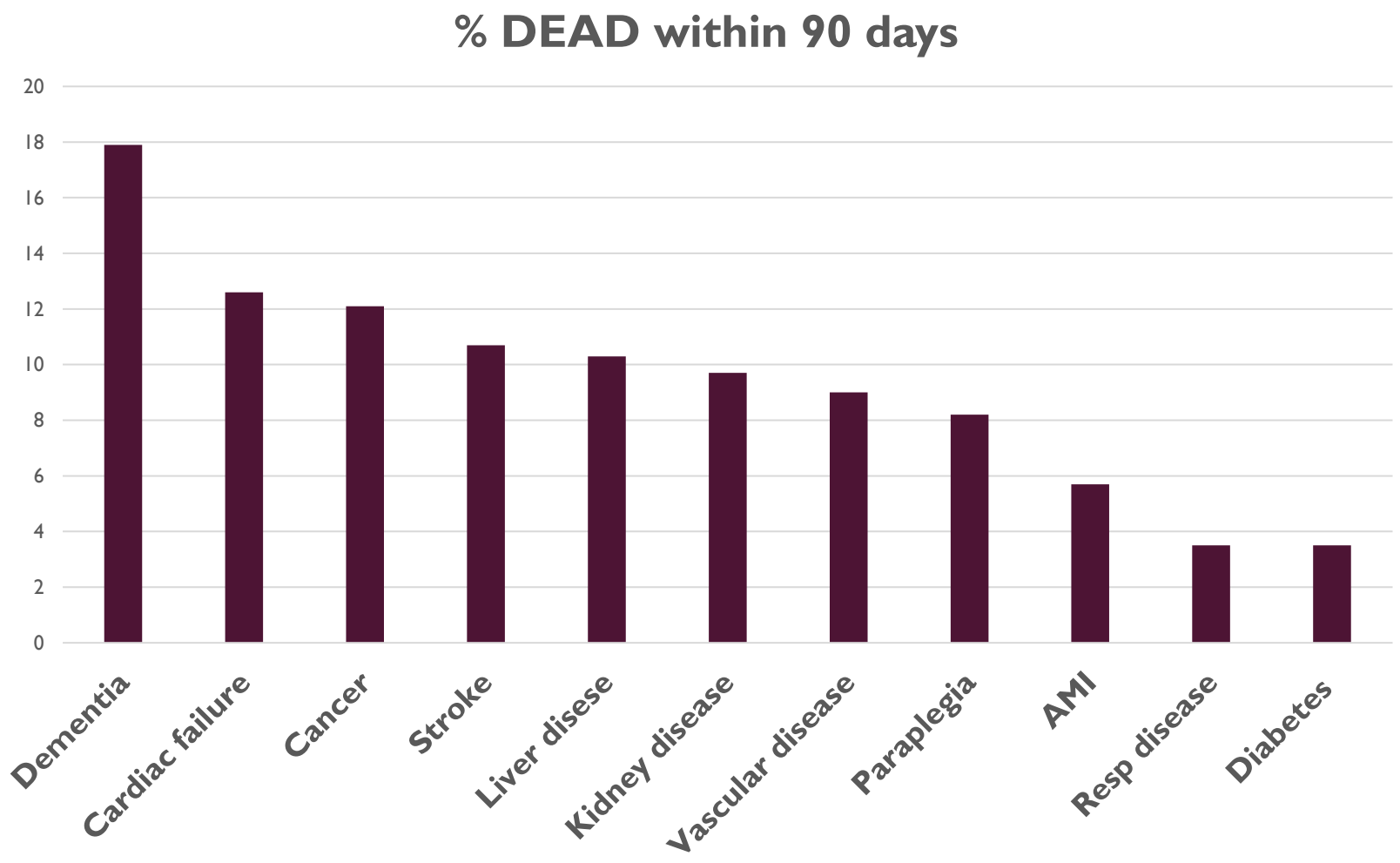
Nationellt system för kunskapsstyrning Hälso- och sjukvård

SVERIGES REGIONER I SAMVERKAN

JÄMLIK VÅRD
KUNSKAPSSTYRNING
ÖVERGRIPANDE VÅRDPROGRAM
PRIORITERINGAR INOM SJUKVÅRDEN

NHS
-30% dör inom ett år efter kirurgi
-1/7 ångrar att dom blivit opererade

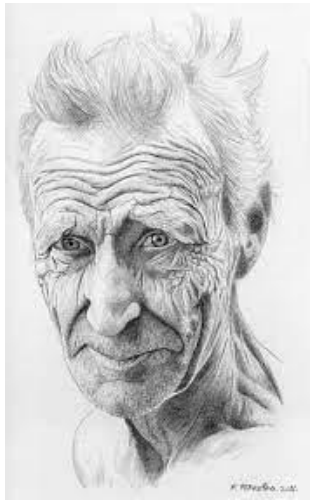
-POPS (NHS): 15% blir inte opererade



Fowler et al BJA 2022

ELEKTIV BUKKIRURGI

85 ÅR
Hjärtsjuk
Multimedicinerad
Cancer i Sigma utan spridning
Inga symptom
Ej anemi, ej striktur
Narkosen: ok



INTE OPERATION

- SYMPTOM SENARE, FÖR SENT FÅR OP
- MÅR BRA FRAM TILL DÖD I ANNAN ÅKOMMA
  OFÖRÄNDRAD TOTAL ÖVERLEVNAD ?

Subjektivt beslut
Ingen optimering
Inga guidelines

OPERATION

- DÖD 2%, LÄCKAGE 10%, FÖRSÄMRAT AT XX?
- BOTAD: OK EFTER 4 VECKOR XX%?
  BÄTTRE TOTAL ÖVERLEVNAD?


LOOK AT ALL THIS
EVIDENCE

GRADE SYSTEM

Litteratursökning: tex 1000 studier

Läs abstract på hela klabbet

Ta ut de bästa för GRADE

SUMMERA

19 Författare från olika länder tittar igenom alla graderingar för 23 interventioner

TABLE 1 (Scoring of single studies)

STUDY NAME					COMMENT
EFFECT MEASURES:	1	2	3	4	What outcome is measured.
PARTICIPANTS					Number of study participants in total and in each arm
STUDY DESIGN					RCT, meta-analysis (RCTs) (****) Observational cohorts (**)
INITIAL VALUE	£ 2	£ 4			If RCT, meta-analysis (RCTs) = 4 points If observational cohort = 2 points
STUDY QUALITY	No limitations	No point (0)			Was the study performed according to the highest standards to minimize bias/error? • Quality of randomization (degree of bias) • Power/Sample size • Blinding • Effect size (clinically significant) • Loss to follow up • Intention to treat followed in study • If observational cohorts, handling of confounders (modelling etc.)
	Some limitations	Possible point (0*)			
	Serious limitations	Point (-1)			
	Very serious limitations	Point (-2)			
VALIDITY OF STUDY POPULATION AND INTERVENTION	No limitations	No point (0)			Are the study population and intervention directly relevant to the ERAS guideline? • Is the study focused on a specific subpopulation or more general? • Is the entire target population reflected (elderly, comorbidities, etc.)? • Is the comparison population also generalizable? • How comparable is the study *intervention* to the recommendation under consideration?
	Some limitations	Possible point (0*)			
	Serious limitations	Point (-1)			
	Very serious limitations	Point (-2)			
HETERO-GENICITY	No limitations	No point (0)			Are the results of the studies consistent in their effects? • If meta-analysis use Chi² or I² (substantial heterogenicity if I² >50%) • If RCT or Observational cohorts but no meta-analysis, check overlap of CI (RR/OR/HR) compared with other studies for the same item.
	Some limitations	Possible point (0*)			
	Serious limitations	Point (-1)			
PRECISION	No limitations	No point (0*)			Is the effect measure estimate precise? • Check spread (CI) of effect measures. Are CIs wide (encompasses a range of effect measures that would have different clinical significance)? • In general, the fewer number of events measured, the less precise the effect measure.
	Some limitations	Possible point (0*)			
	Serious limitations	Point (-1)			
PUBLICATION AND REPORTING BIAS	No limitations	No point (0)			Do the published studies likely reflect the true range of findings of completed studies? • If meta-analysis check funnel plots. • Check clinical trials. gov). • Consider reporting bias (are the studies only reporting the effect measures showing positive outcome).
	Some limitations	Possible point (0*)			
	Serious limitations	Point (-1)			
≥2 POSSIBLE POINTS (-)	≥2 possible points (Above)	Point (-1)			Are two or more of the previous criteria rated as a possible point deduction point (0*)?
EFFECT SIZE	Large effect	Point (+1)			Is the effect size large or very large? • A rough estimate of a large effect size is RR/OR/HR <0.5 or >2 • A rough estimate of a very large effect size is RR/OR/HR <0.2 or >5
	Very large effect	Point (+2)			
SUMMARY OF EVIDENCE	Total sum:				Subtract and add from the initial value

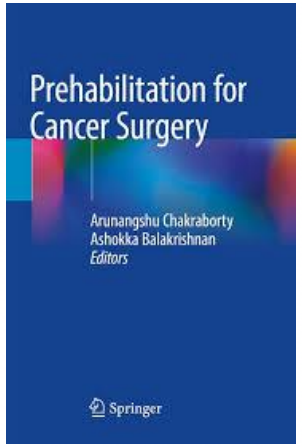
NYA ERAS GUIDELINES 2025 JANUARI ?????

I. PREHABILITERING

Number of articles found in the literature search (2000-2023):

PubMed / Medline: 236; Cochrane: 75; Clinical trials.gov: 27 (12 completed, 15 recruiting/unknown).

Type	Number
Meta-analysis	18
RCT	14
Medium/Small cohorts	20
Large cohorts	1
Clinical trial protocol	9
Review	47
Other	140
Sum	**249**



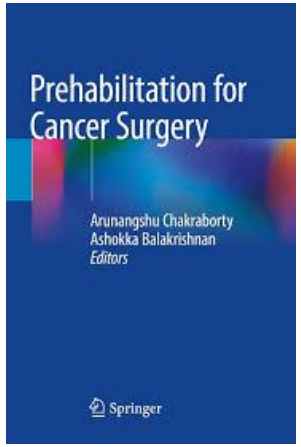
NYA ERAS GUIDELINES 2025 JANUARI ?????

I. PREHABILITERING

Summary of initiated and published / not published studies in clinical trials.gov.

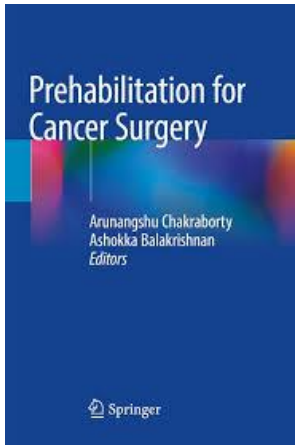
See above: Each study to be checked during the grading process.

No	Study	Design	Outcome	Published Yes/ No
1	NCT03758209	RCT	Unclear /Completed	No
2	NCT02502760	RCT	Unclear /Completed	Yes
3	NCT03096951	RCT	Unclear /Completed	No
4	NCT04880772	RCT	Unclear /Completed	No
5	NCT04247776	RCT	Unclear /Completed	No
6	NCT01356264	RCT	Completed	Yes
7	NCT02746731	RCT	Completed- depr-preh	Yes-not included
8	NCT04167436	RCT	Recruiting	No
9	NCT05854394	RCT	Recruiting	No
10	NCT05851235	Single gr	Recruiting	No
11	NCT05999370	RCT	Recruiting	No
12	NCT05448846	RCT	Recruiting	No
13	NCT04595604	RCT	Recruiting	No
14	NCT04909567	RCT	Recruiting	No
15	NCT04270500	RCT	Recruiting	No
16	NCT03336229	RCT	Unknown	No
17	NCT01924897	RCT	Unknown	No
18	NCT02531620	RCT	Unknown	No
19	NCT03509428	RCT	Unknown	No



NYA ERAS GUIDELINES 2025 JANUARI ?????

I. PREHABILITERING



Level of evidence: Prehabilitation before surgery

Functional capacity: Moderate evidence in favor and against improvement

Complications: Low evidence in favor and against improvement

Length of stay: Low evidence in favor and against improvement

NYA ERAS GUIDELINES 2025 JANUARI ?????

2.VERKTYG FÖR ATT IDENTIFIERA RISKPATIENTER

Level of evidence and recommendations:

Recommendation: Use of predictive tools to identify high risk patients prior

to colorectal surgery to optimize perioperative planning and preparation.

Level of evidence: Using predictive tools

Mortality: Very low

Complications: Very low

Recommendation grade: Weak

NYA ERAS GUIDELINES 2025 JANUARI ?????

3. SAMTIDIGA SJUKDOMAR

Level of evidence and recommendations:

Recommendation: Comorbidities should be optimized before surgery

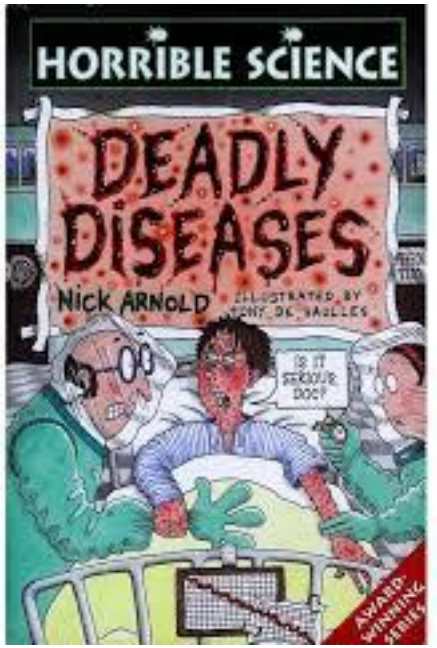
Level of evidence: optimizing comorbidities

Mortality: Low

Complications: Low

Length of stay: Low

Recommendation grade: Strong



NYA ERAS GUIDELINES 2025 JANUARI ?????

4. ALKOHOL

Level of evidence and recommendations:

Recommendation: Patients with high rates of alcohol consumption should stop drinking 4 weeks prior to surgery.

Level of evidence: Excessive alcohol use before surgery

Mortality: Low

Complications: Low

Length of stay: Low

Recommendation grade: Strong

NYA ERAS GUIDELINES 2025 JANUARI ?????

5. RÖKNING

Recommendation: Cigarette smokers should stop smoking and undergo behavioral intervention, with nicotine replacement, at least 4 weeks prior to surgery.

Level of Evidence: Smoking Cessation before Surgery

Mortality: Moderate

Complications: Moderate

Recommendation grade: Strong

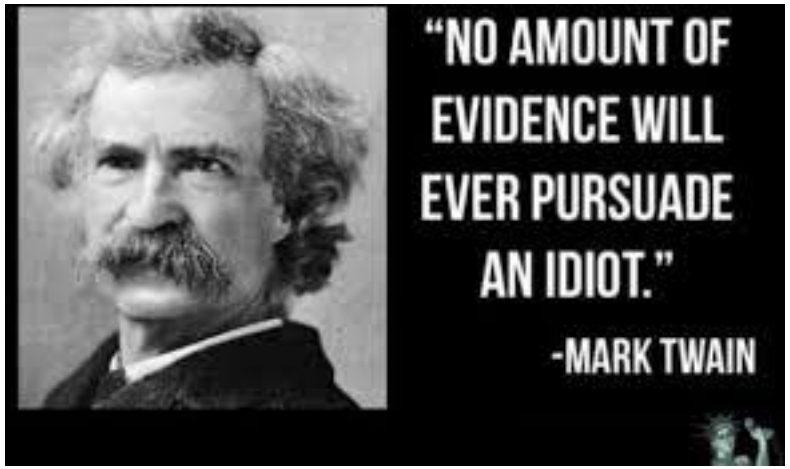
NYA ERAS GUIDELINES 2025 JANUARI ?????

6. ANEMI

IV iron supplementation may be more effective than oral iron
-Improved long-term survival
- Decreased rate of transfusions

Patients with indication for pre-OP correction of anemia should receive supplementation with **Folate/VitB12** as a complement

For severe anemia or limited time before surgery, high-dose **erythropoietin (300 IU/kg)** with iron may be an alternative to iron alone, enabling faster anemia correction and reducing transfusion needs


"NO AMOUNT OF EVIDENCE WILL EVER PURSUADE AN IDIOT."
-MARK TWAIN

DAG 0 | VECKA 1 | VECKA 2-16 | VECKA OP

OPTIMERINGSENHET: DAGVÅRD (ÖPPET 5 DAGAR I VECKAN)
OBLIGATORISK NÄRVARO: SAMTLIGA PATIENTER

FÖRSTA MOTTAGNINSBESÖKET: 30 MINUTER MED LÄKARE OCH SKÖTERSKA

HÖGRISK MDK

- DIAGNOS
- UTÖKAD INFORMATION OM VILKEN BEHANDLING SOM KRÄVS
- INFORMATION OM PREOPTIMERINGS ENHETEN

FYSIOLOGISKA TESTER OPTIMERING

DIREKT OCH KONTINUERLIG DIETISTKONTAKT

KONSULT
- LUNGMEDICIN
- KARDIOLOGI
- FYSIOLOG
- ENDOKRINOLOG

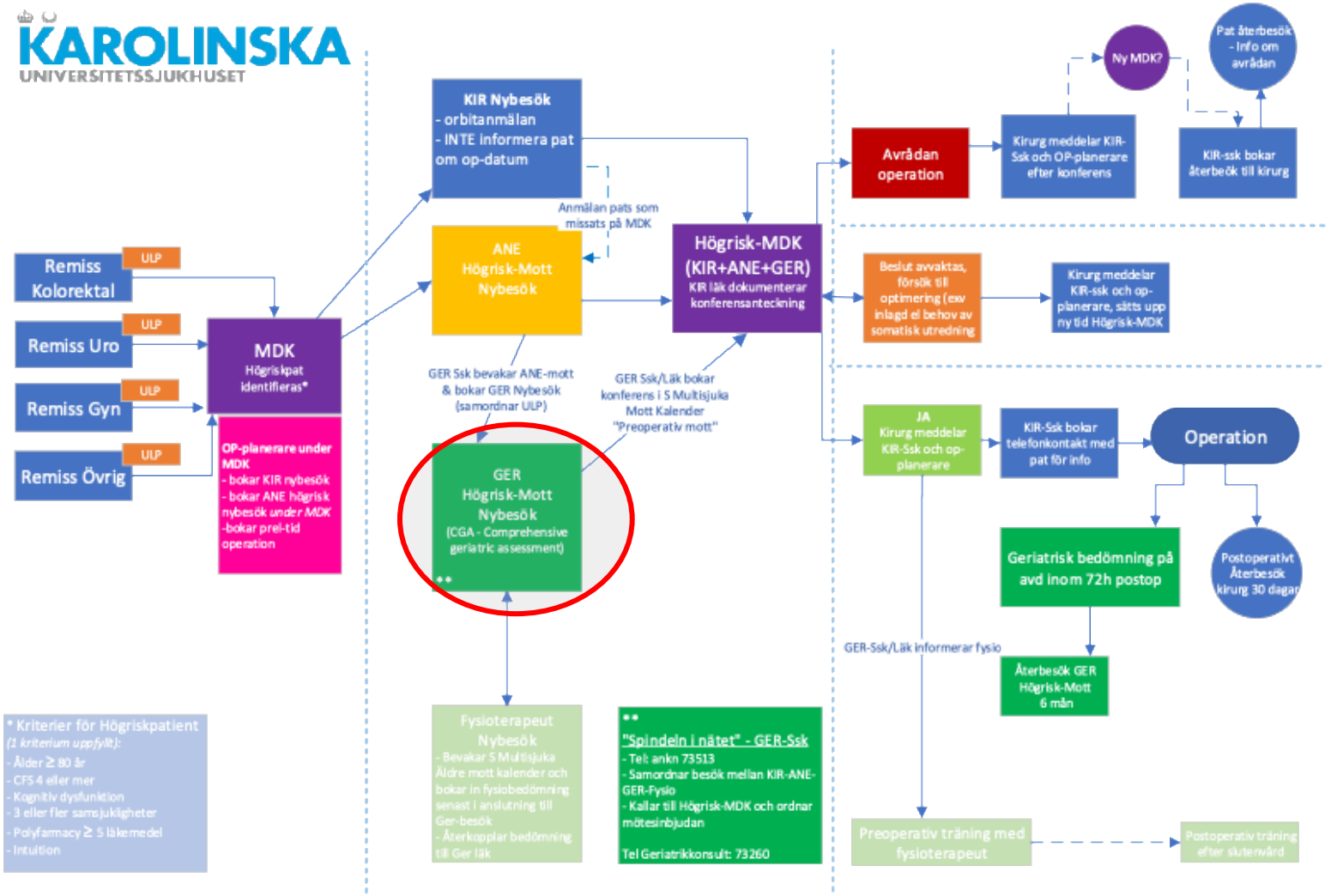
INTENSIV FYSISK TRÄNING

ERAS UNDERVISNING / INFO JÄRNINFUSION: VB

- PREHAB: FYSIOTERAPEUT
- OPTIMERING HYPERGLYKEMI
- RÖK OCH ALKOHOL AVVÄNJNING
- ONKOLOGKONSULTATION
- UPPFÖLJNING: ANEMI
- NY OPERABILITETSBEDÖMNING VB
- NY KONSULT VB

RCT: DANDERYD
NU > 300 pat

OPTIMERAD PATIENT


KAROLINSKA
UNIVERSITETSSJUKHUSET
Remiss Kolorektal
ULP
Remiss Uro
ULP
Remiss Gyn
ULP
Remiss Övrig
ULP
MDK
Högriskpat identifieras*
OP-planerare under MDK
- bokar KIR nybesök
- bokar ANE högrisk nybesök under MDK
-bokar prel-tid operation
KIR Nybesök
- orbitanmälan
- INTE informera pat om op-datum
Anmälan pats som missats på MDK
ANE
Högrisk-Mott
Nybesök
GER Ssk bevakar ANE-mott & bokar GER Nybesök (samordnar ULP)
GER Ssk/Läk bokar konferens i S Multisjuka Mott Kalender "Preoperativ mott"
GER
Högrisk-Mott
Nybesök
(CGA - Comprehensive geriatric assessment)
**
Högrisk-MDK
(KIR+ANE+GER)
KIR läk dokumenterar konferensanteckning
Avrådan operation
Ny MDK?
Pat återbesök - Info om avrådan
Kirurg meddelar KIR-Ssk och OP-planerare efter konferens
KIR-ssk bokar återbesök till kirurg
Beslut avvaktas, försök till optimering (ex inlagd el behov av somatisk utredning
Kirurg meddelar KIR-ssk och op-planerare, sätts upp ny tid Högrisk-MDK
JA
Kirurg meddelar KIR-Ssk och op-planerare
KIR-Ssk bokar telefonkontakt med pat för info
Operation
Geriatrisk bedömning på avd inom 72h postop
Postoperativt Återbesök kirurg 30 dagar
GER-Ssk/Läk informerar fysio
Återbesök GER Högrisk-Mott 6 mån
Preoperativ träning med fysioterapeut
Postoperativ träning efter slutenvård
Fysioterapeut
Nybesök
- Bevakar S Multisjuka Äldre mott kalender och bokar in fysiobedömning senast i anslutning till Ger-besök
- Återkopplar bedömning till Ger läk
**
"Spindeln i nätet" - GER-Ssk
- Tel: ankn 73513
- Samordnar besök mellan KIR-ANE-GER-Fysio
- Kallar till Högrisk-MDK och ordnar mötesinbjudan
Tel Geriatrikkonsult: 73260
* Kriterier för Högriskpatient
(1 kriterium uppfyllt):
- Ålder ≥ 80 år
- CFS 4 eller mer
- Kognitiv dysfunktion
- 3 eller fler samsjukligheter
- Polyfarmacy ≥ 5 läkemedel
- Intuition