



XXIX IFSO World Congress

1-4 September 2026 | Toronto, Canada

PATIENTS WITH BMI > 60.
EXPECTED OUTCOMES AND STRATEGIES TO MITIGATE
COMPLICATIONS

TORONTO 2026

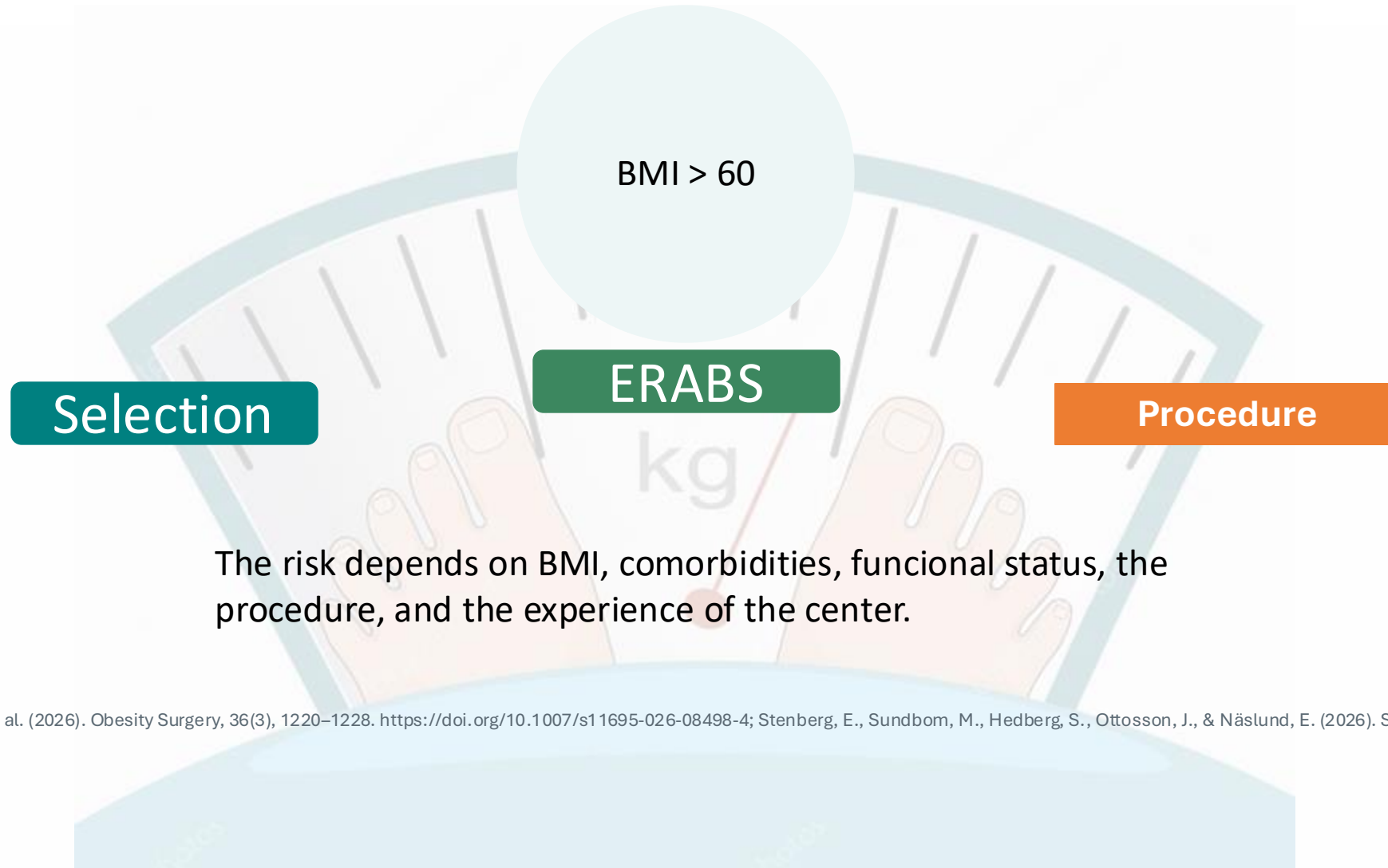
The Future of Obesity Management:
From Weight Loss to Health Gain



ifso2026.org

NOTHING TO DISCLOSE

¿HOW FAR CAN SAFETY BE PUSHED, AND HOW CAN RISK BE OPTIMIZED ? THE GOLD IS TO SELECT

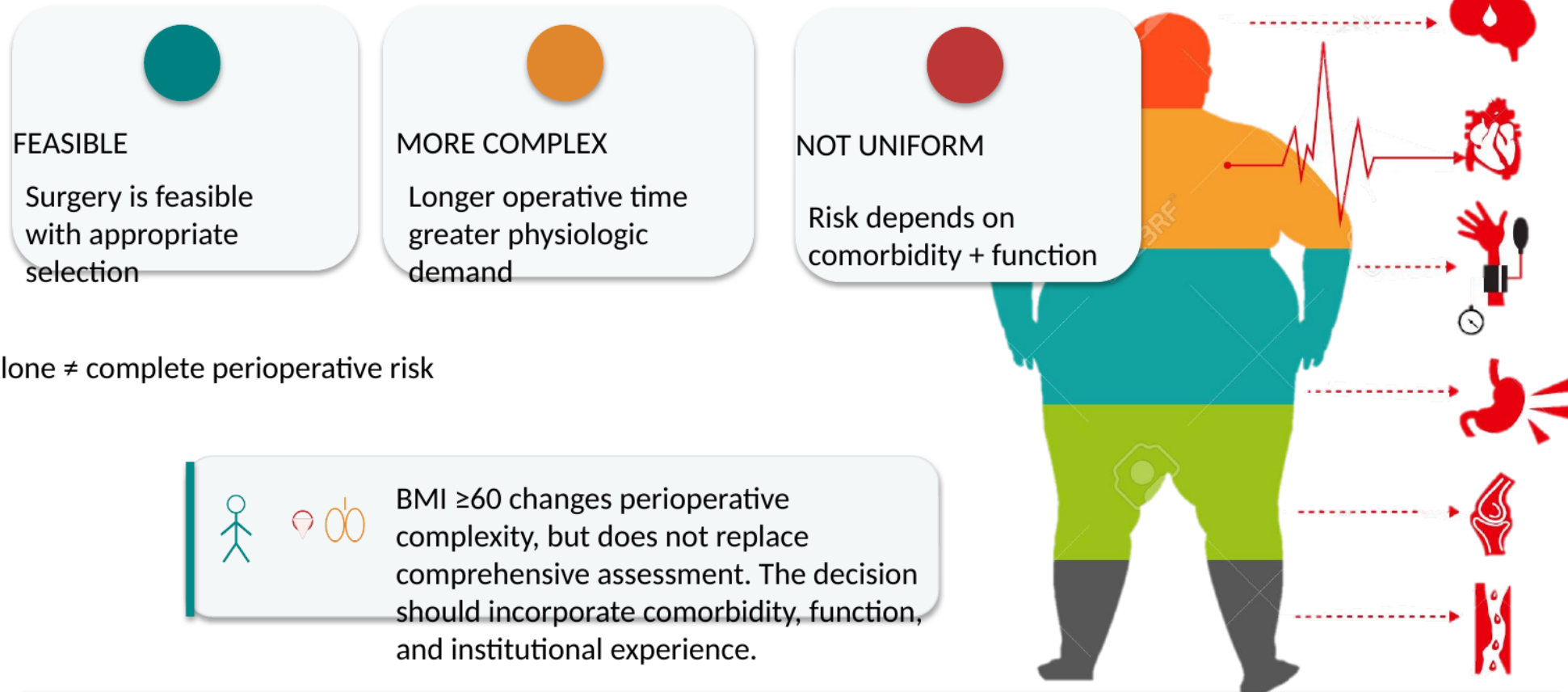


The risk depends on BMI, comorbidities, functional status, the procedure, and the experience of the center.

Kermansaravi et al. (2026). Obesity Surgery, 36(3), 1220–1228. <https://doi.org/10.1007/s11695-026-08498-4>; Stenberg, E., Sundbom, M., Hedberg, S., Ottosson, J., & Näslund, E. (2026). SOARD, 22(7), 707–714.



Extreme BMI changes the context, not necessarily the indication



AI alone $\neq$ complete perioperative risk

Kermansaravi et al. (2026). Obesity Surgery, 36(3), 1220–1228. <https://doi.org/10.1007/s11695-026-08498-4>; Badaoui, J. N., Maroun, J. W., Oyefule, O. O., et al. (2022). SLEPT, 32(4), 466–471. <https://doi.org/10.1097/SLE.0000000000001063>



SOReg 2026: Scandinavian Obesity Surgery Registry

83,057

patients

7.2%

overall
complication rate

9.8 years

median follow-up

Increasing BMI was associated with longer operative time, but not necessarily with a proportional increase in early complications.



Mortality

BMI 60–69
OR 1.66

BMI ≥ 70
OR 2.33*

35-49 BMI
50-59 BMI
60-69 BMI
70> BMI



What changes prognosis: the SOReg registry shows that long-term mortality increases at the extremes of BMI, even though overall postoperative complication rates do not clearly differ across categories.

Stenberg, E., Sundbom, M., Hedberg, S., Ottosson, J., & Näslund, E. (2026). SOARD, 22(7), 707–714. <https://doi.org/10.1016/j.soard.2026.03.012>



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(INOSD) Iran National Obesity Surgery Database 2026: BMI 50–60 vs ≥ 60

1430

patients

13.1%

BMI ≥ 60

ICU



30-day mortality



Readmission



2-year %TWL

41 vs 37%

BMI 50–60

BMI ≥ 60

After the first year:
weight loss favored the BMI
<60 group

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A Comparative Analysis of Postoperative Complications and Five-Year Metabolic Outcomes Following Metabolic and Bariatric Surgery in Patients with BMI 50–60 kg/m² and BMI > 60 kg/m²

Research | Published: 30 January 2026

Volume 36, pages 1220–1228 (2026) [Cite this article](#)

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[Mohammad Kermansaravi](#), [Seyed Amin Setarehdan](#) , [Shahab Shahabi Shahmiri](#) , [Masoumeh Shamsavan](#), [Abdolreza Pazouki](#) & [Amir Hossein Davarpanah Jazi](#)

In INOSD, ICU admission and 30-day mortality were higher in patients with BMI ≥ 60 , whereas readmission and complication rates were similar. Weight loss at 2 years was comparable and subsequently favored the BMI <60 group.

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A Comparative Analysis of Postoperative Complications and Five-Year Metabolic Outcomes Following Metabolic and Bariatric Surgery in Patients with BMI 50–60 kg/m² and BMI > 60 kg/m²

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The procedures included sleeve gastrectomy, RYGB and one anastomosis gastric bypass. OAGB showed the greatest total weight loss at two years, as well higher remission rates for type 2 diabetes.



BARI-10-POL: metabolic effectiveness persists at 10 years



► [Langenbecks Arch Surg.](#) 2025 Apr 23;410(1):142. doi: [10.1007/s00423-025-03713-9](#)

Long-term outcomes of metabolic bariatric surgery: a 10-Year multicenter retrospective study in Poland (BARI-10-POL).

[Natalia Dowgiałto-Gornowicz](#)^{1,∞}, [Paweł Jaworski](#)², [Michał Orłowski](#)³, [Paula Franczak](#)³, [Monika Proczko-Stepaniak](#)⁴, [Anna Kloczkowska](#)⁴, [Izabela Karpińska](#)⁵, [Paweł Lech](#)¹, [Piotr Major](#)⁵

► [Author information](#) ► [Article notes](#) ► [Copyright and License information](#)

PMCID: PMC12018482 PMID: [40266387](#)

Procedures included: Sleeve gastrectomy, RYGP, OAGB

BMI >50 Vs BMI < 50

revisional surgery: 43.8% vs 19.9%

FOLLOW-UP
10 years
remission + weight
regain

Longitudinal message: metabolic benefit can persist for a decade. At the same time, weight regain and revisional surgery justify a structured follow-up program.

Czerwińska et al. (2026). Scientific Reports. <https://doi.org/10.1038/s41598-026-58057-1>



MBSAQIP: WHAT HAPPENS WITH BYPASS AT BMI ≥ 60 ?



2020–2023 analysis • 233,828 patients undergoing RYGB

BMI ≥ 60 vs < 60 kg/m²

- Postoperative complications: 5.23% vs 4.44%.
- Acute kidney injury: 0.23% vs 0.07%.
- Unplanned ICU admission: 1.08% vs 0.73%.
- Emergency department visit after discharge: 12.38% vs 11.02%.

Laparoscopic vs robotic in BMI ≥ 60

- No significant difference in 30-day complications was observed.
- The robotic approach had a longer mean operative time.
- A shorter mean hospital stay was observed with the robotic approach.
- The authors note the need for prospective multicenter studies.

BMI ≥ 60 identifies a group with higher perioperative risk; robotic surgery did not demonstrate clear superiority in 30-day complications.

Source: Robotic vs. laparoscopic Roux-en-Y gastric bypass in patients with BMI ≥ 60 kg/m²: results of over 230,000 patients



MBSAQIP: SLEEVE GASTRECTOMY IN BMI ≥ 60

2019-2022 • propensity score-matched analysis

297,250 patients underwent laparoscopic sleeve gastrectomy and 81,008 underwent robotic sleeve gastrectomy.

In patients with BMI ≥ 60 , laparoscopic sleeve gastrectomy showed higher rates of mortality, staple-line leak, bleeding, readmission, and interventions compared with BMI < 60 .

In BMI ≥ 60 , robotic sleeve gastrectomy was associated with fewer readmissions, leaks, and bleeding events than laparoscopic sleeve gastrectomy.

The tradeoff for this potential advantage was longer operative time.

Do not confuse association with causal superiority.

Extreme obesity changes technical difficulty. The robotic approach may offer technical advantages in some settings, but the evidence remains observational.

Source: Zevallos. A.. et al. (2024). A superior approach? The role of robotic sleeve gastrectomy in patients with super super



WHY NOT RELY ON A SINGLE POPULATION?

Evidence in BMI ≥ 60 kg/m² comes from registries with different strengths



INOSD (Iran): extreme-obesity-specific cohort; useful for perioperative and metabolic outcomes.



SOReg: 83,057 patients with a median follow-up of 9.8 years; provides a longitudinal perspective.



 MBSAQIP (USA/Canada): large multicenter volume; particularly useful for 30-day outcomes.

Comparing registries improves generalizability, but does not allow us to assume that the populations are equivalent.

For extreme BMI: triangulation of evidence > reliance on a single registry.

THREE REGISTRIES, THREE PERSPECTIVES

The clinical question changes depending on the registry

Registry	Population / scale	Main strength	What it contributes
INOSD 	1,430 patients with BMI ≥ 50 ; 13.1% ≥ 60	Specific cohort + metabolic outcomes	ICU, 30-day mortality, %TWL, and metabolic remission
SOReg 	83,057 patients; median follow-up 9.8 years	Scale + longitudinal follow-up	Overall early complications and long-term mortality
MBSAQIP 	Large multicenter databases	Volume + 30-day outcomes	Perioperative risk and laparoscopic/robotic comparison



CONCLUSION: The evidence consistently indicates greater complexity at BMI ≥ 60 , but the magnitude and type of risk depend on the outcome, procedure, and population studied.

Sources: Kermansaravi, A., et al. (2026). Obesity Surgery, 36(3), 1220–1228. <https://doi.org/10.1007/s11695-026-08498-4>;



Does BMI >60 by itself
increase
complications?

ORIGINAL ARTICLES



Does BMI Matter? A 10-Year Single Institutional Experience on 571 Bariatric Surgery Patients With BMI >50 kg/m²

Joseph N. Badaoui*, Justin W. Maroun*, Omobolanle O. Oyefule*, Jay Mandrekar†, Travis J. McKenzie*, Michael L. Kendrick*, Todd A. Kellogg*, Omar M. Ghanem*

[Authors and Affiliations](#) >

Surgical Laparoscopy, Endoscopy & Percutaneous Techniques 32(4):p 466-471, August 2022. | DOI: 10.1097/SLE.0000000000001063

571 patients • 10 years

No significant difference

in early complications
on multivariable analysis

Interpretation

- BMI should not be the only predictor
- Comorbidity modifies risk
- institutional experience matters



Application: a 10-year multivariable analysis found no significant difference in early complications between BMI 50–60 and >60. This supports avoiding arbitrary barriers based solely on BMI.

Badaoui, J. N., Maroun, J. W., Oyefule, O. O., et al. (2022). SLEPT, 32(4), 466–471. <https://doi.org/10.1097/SLE.0000000000001063>



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BMI ≥ 70 : THE EXTREME END OF THE SPECTRUM

230

patients

7%

complications

1%

30-day mortality

Which procedure?

SG

RYGB

AGB

**SG: proposed as the first option
for safety + potential for later conversion**

Outcomes of bariatric surgery in extreme obesity: results from the United Kingdom National Bariatric Surgery Registry for patients with a body mass index $>70 \text{ kg/m}^2$

Anna Kamocka et al. Surg Obes Relat Dis. 2021 Oct.

RYGB and SG achieved greater weight loss than adjustable gastric banding.

In patients with BMI ≥ 70 , surgery remains feasible, but procedure selection and anesthesia/ICU infrastructure become even more important. SG may serve as a platform for later conversion.

Procedure selection: safety vs metabolic potency

SG

Lower complexity
platform for conversion

**RYG
B**

Greater metabolic effect
+ GERD control

**BPD/
DS**

Maximum weight loss
greater complexity

The choice must be individualized

SG prioritizes lower complexity and the option for conversion; RYGB adds metabolic potency and GERD control; BPD/DS maximizes weight loss at the cost of greater complexity and nutritional demands.

Kermansaravi et al. (2026). Obesity Surgery, 36(3), 1220-1228. <https://doi.org/10.1007/s11695-026-08498-4>; Stenberg, E., Sundbom, M., Hedberg, S., Ottosson, J., & Näslund, E. (2026). SOARD, 22(7), 707-714. <https://doi.org/10.1016/j.soard.2026.03.012>;
Kamocka, A., Parmar, C., Kurzatkowski, K., et al. (2021). SOARD, 17(10), 1732-1738. <https://doi.org/10.1016/j.soard.2021.06.002>



MBSAQIP 2015–2023: DOES LOWERING BMI BEFORE SURGERY HELP?

1,316,050 cases included after exclusion criteria

Almost 83% achieved a preoperative reduction in BMI.
6.5% achieved a reduction of >10%.

Preoperative reduction was associated with a lower risk of prolonged hospital stay

BMI >60, even a reduction of less than 10% was associated with a lower risk of serious complications.

With a reduction of >10%, favorable trends were also observed regarding serious complications and readmission



Preoperative weight loss may be an optimization strategy, rather than an absolute barrier to accessing surgery.

What if I cannot lower BMI before surgery?

NO

YES

make preoperative weight reduction
an absolute barrier

optimize everything modifiable

- Comorbidities
- Respiratory status
- Nutrition
- Functional capacity
- Expert center

If substantial weight loss is not achieved, the preoperative period can still be used to optimize comorbidities, respiratory status, nutrition, function, and center preparedness. weight loss should not automatically become an indefinite barrier.

Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346–1359. <https://doi.org/10.4158/GL-2019-0406>; Yang, N., Hua, H., Liu, S., et al. (2024). International Journal of Surgery, 110(5), 2577–2582. <https://doi.org/10.1097/jjs9.0000000000001108>



Which patient with BMI ≥ 60 needs more optimization?

Factors associated with a poorer prognosis includes



Heart failure



OSA / hypoventilation



CKD



Prior DVT/PE



Frailty / poor functional status



Vascular disease

Anesthetic assessment must anticipate difficulties regarding the airway, ventilation, and extubation.



The useful question is not only “What is the BMI?” but “What physiologic reserve does the patient have?” OSA/hypoventilation, heart failure, CKD, vascular disease, DVT/PE, and frailty alter risk.

Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346–1359. <https://doi.org/10.4158/GL-2019-0406>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2020). Obesity, 28(4), O1–O58. <https://doi.org/10.1002/oby.22719>



Prehabilitation: reducing risk before entering the operating room

weight loss

Low-calorie diet
as tolerated

RESPIRATORY

**CPAP/NIV
entrenamien
to**

CARDIOVASCULAR

Optimize
comorbidities

FUNCTIONAL

Activity +
prehabilitation

91% of centers in a multicenter survey considered preoperative weight reduction beneficial.

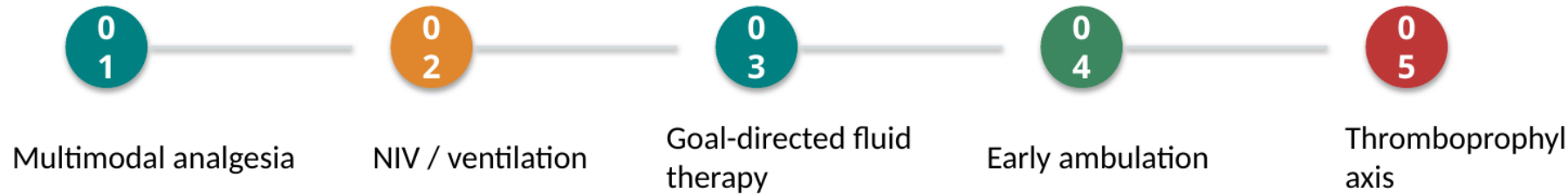
*The goal is to increase physiological reserve,
not to reach an arbitrary BMI.*

Prehabilitation means using the time before surgery to increase physiologic reserve: weight loss as tolerated, respiratory/cardiovascular optimization, nutrition, and functional capacity.

Yang, N., Hua, H., Liu, S., et al. (2024). International Journal of Surgery, 110(5), 2577–2582. <https://doi.org/10.1097/j59.0000000000001108>



ERABS: recovery begins before the incision



Minimize opioids, atelectasis, volume overload, and immobility.



ERABS should be considered a continuous process: multimodal analgesia, respiratory support when appropriate, goal-directed fluid therapy, thromboprophylaxis, and early mobilization. In extreme BMI, protocol adherence is especially important.

Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346–1359. <https://doi.org/10.4158/GL-2019-0406>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2020). Obesity, 28(4), O1–O58. <https://doi.org/10.1002/oby.22719>



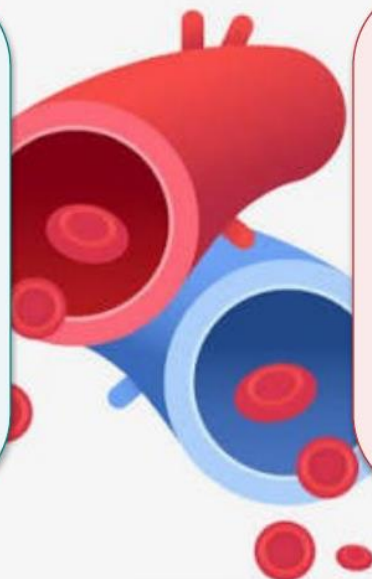
Thromboprophylaxis: balancing VTE and bleeding

THROMBOTIC RISK

- Extreme BMI
- immobility
- prior VTE
- prolonged surgery

BLEEDING RISK

- active bleeding
- reoperation
- Hb drop
- bloody drain output



Extreme obesity combines high thrombotic risk with bleeding risk. The strategy should be individualized and reassessed according to hemostasis, mobility, and VTE risk.

Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346-1359. <https://doi.org/10.4158/GL-2019-0406>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2020). Obesity, 28(4), O1-O58. <https://doi.org/10.1002/oby.22719>



Bleeding prevention: hemostasis test before closure

1

Raise blood pressure
temporarily

2

Reduce pneumoperitoneum
and reassess
hemostasis

3

Control bleeding
before closure

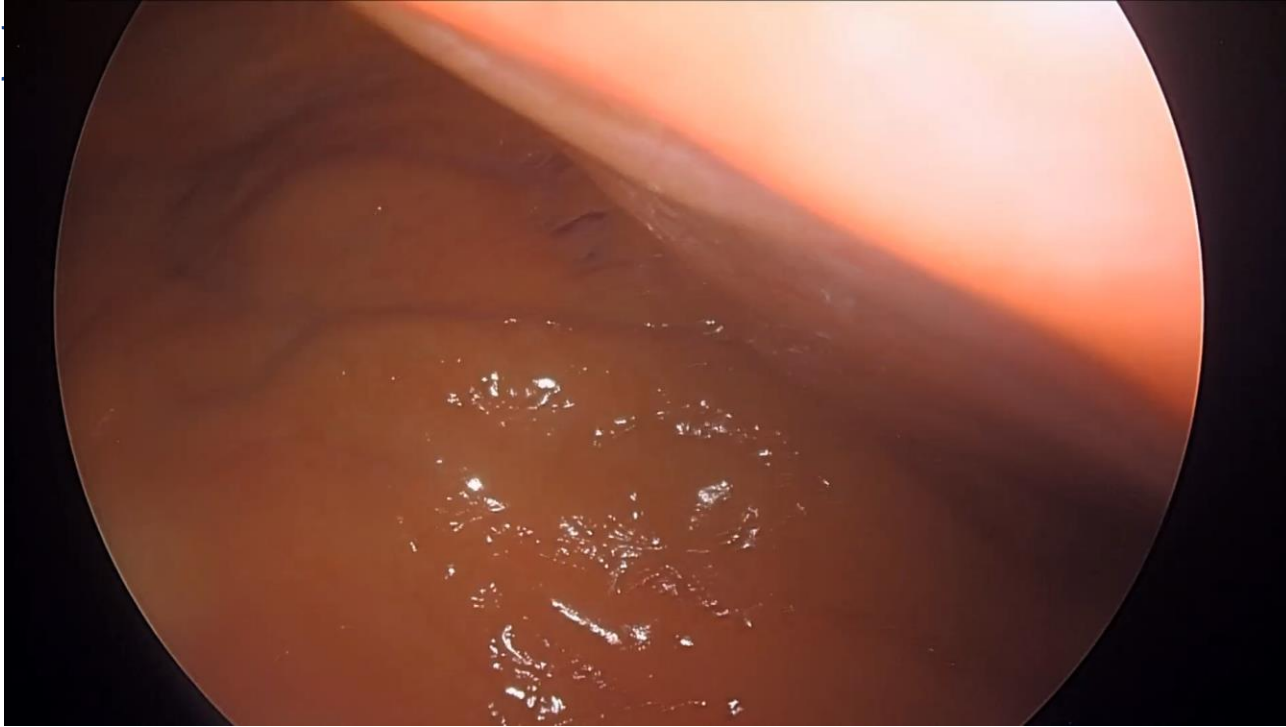


The hemostasis test before closure aims to convert silent bleeding into visible, treatable bleeding. The maneuver should be coordinated with anesthesia and not interpreted as a rigid target for every patient.

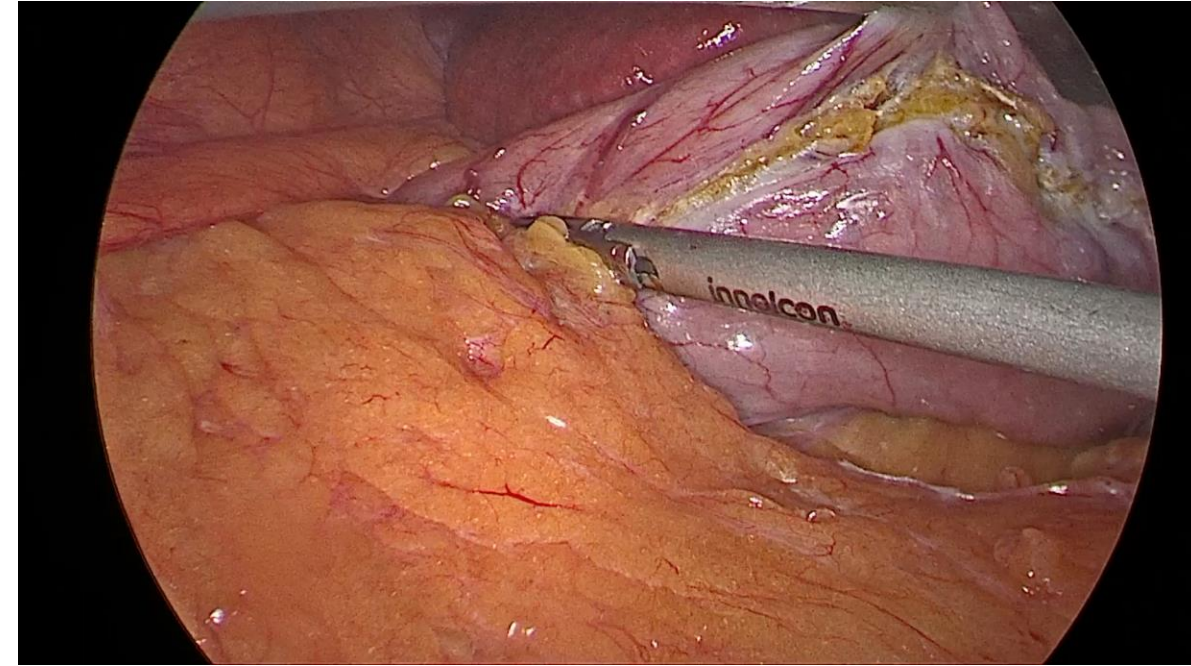
Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346-1359. <https://doi.org/10.4158/GL-2019-0406>



PATIENTS WITH BMI > 60. SURGICAL CASE



MALE PATIENT, 120 BMI .



FEMALE, 82 BMI



Expert center: patient selection includes system selection

Risk also depends on the system surrounding the surgeon.

Bariatric team

experience with extreme BMI

Anesthesia

airway + ventilation

ICU

respiratory/hemodynamic rescue

Endoscopy / IR

complication management

Extreme BMI + limited infrastructure = risk may not be reproducible



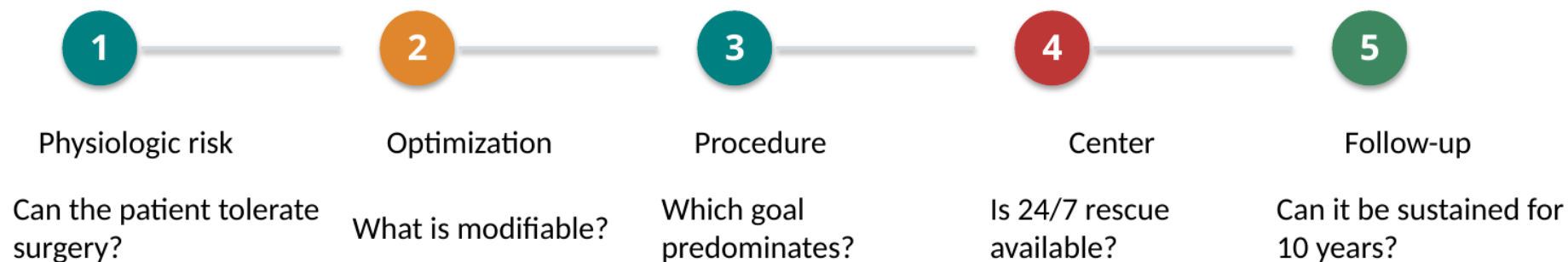
In extreme BMI, the “procedure” includes the system: bariatric team, advanced anesthesia, ICU, and access to therapeutic endoscopy/interventional radiology. Outcomes also depend on rescue capability.

Stenberg, E., Sundbom, M., Hedberg, S., Ottosson, J., & Näslund, E. (2026). SOARD, 22(7), 707–714. <https://doi.org/10.1016/j.soard.2026.03.012>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346–1359. <https://doi.org/10.4158/GL-2019-0406>; Yang, N., Hua, H., Liu, S., et al. (2024). International Journal of Surgery, 110(5), 2577–2582. <https://doi.org/10.1097/J9.0000000000001108>



Practical selection algorithm

Asses physiological reserve.



SHARED DECISION-MAKING → SAFETY → SUSTAINABLE OUTCOME

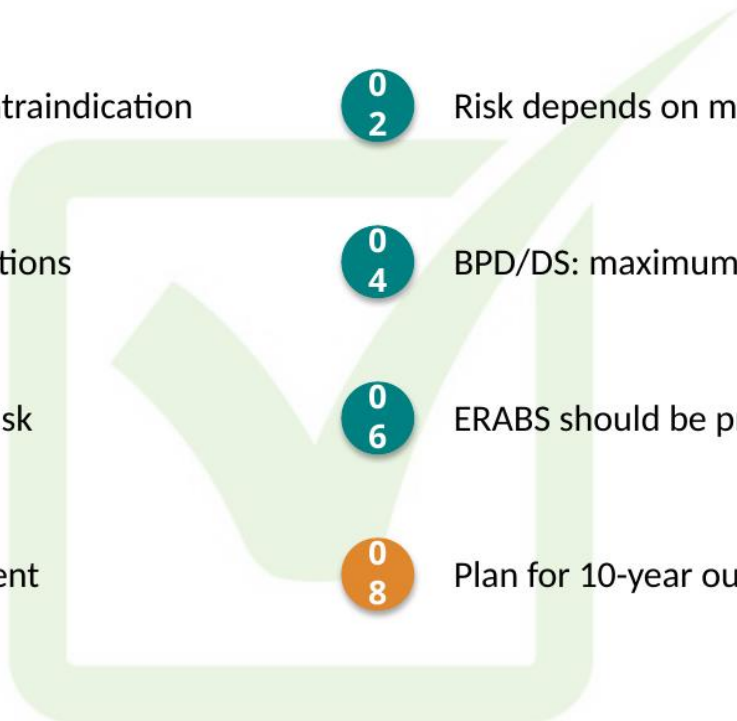


Algorithm: 1) physiologic reserve; 2) optimization; 3) procedure according to goals; 4) 24/7 rescue capability; 5) longitudinal follow-up. This is a shared decision that depends on experience.

Kermansaravi et al. (2026). Obesity Surgery, 36(3), 1220–1228. <https://doi.org/10.1007/s11695-026-08498-4>; Stenberg, E., Sundbom, M., Hedberg, S., Ottosson, J., & Näslund, E. (2026). SOARD, 22(7), 707–714. <https://doi.org/10.1016/j.soard.2026.03.012>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346–1359. <https://doi.org/10.4158/GL-2019-0406>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2020). Obesity, 28(4), O1–O58. <https://doi.org/10.1002/oby.22719>



Conclusions

- 
- 01 BMI ≥ 60 is not an absolute contraindication
 - 02 Risk depends on more than BMI
 - 03 SG/RYGB: reasonable initial options
 - 04 BPD/DS: maximum potency, greater complexity
 - 05 Prehabilitation $\downarrow$ modifiable risk
 - 06 ERABS should be protocolized
 - 07 Expert center = part of treatment
 - 08 Plan for 10-year outcomes

In extreme BMI, safety is built before, during, and after the operation.

Kermansaravi et al. (2026). Obesity Surgery, 36(3), 1220–1228. <https://doi.org/10.1007/s11695-026-08498-4>; Stenberg, E., Sundbom, M., Hedberg, S., Ottosson, J., & Näslund, E. (2026). SOARD, 22(7), 707–714. <https://doi.org/10.1016/j.soard.2026.03.012>; Czerwińska et al. (2026). Scientific Reports. <https://doi.org/10.1038/s41598-026-58057-1>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2019). Endocrine Practice, 25(12), 1346–1359. <https://doi.org/10.4158/GL-2019-0406>; Mechanick, J. I., Apovian, C., Brethauer, S., et al. (2020). Obesity, 28(4), O1–O58. <https://doi.org/10.1002/oby.22719>



XXX IFSO WORLD CONGRESS

"Advancing Multimodal Obesity Care"

24-27 August 2027

ifso2027.org



IFSO
PARIS 2027

See you in
PARIS



What happens when BMI exceeds 60?

operative time

↑ progressive

ICU / organ
support

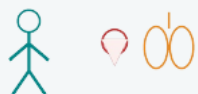


Mortality

↑ long term

Overall
complications

≈ comparable



Longer operative time and greater support needs do not automatically imply a proportional increase in early complications. Late risk warrants long-term follow-up.

Surgery for Obesity and Related Diseases

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Original article

Laparoscopic metabolic and bariatric surgery in patients with high body mass index—a nationwide registry-based cohort study

Erik Stenberg M.D., Ph.D. ^a  , Magnus Sundbom M.D., Ph.D. ^b, Suzanne Hedberg M.D., Ph.D. ^{c d}, Johan Ottosson M.D., Ph.D. ^a, Erik Näslund M.D., Ph.D. ^e



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