



XXVIII IFSO World Congress

9-12 September 2025 | Santiago, Chile

Bypass Equipoise Sleeve trial- BEST

a Swedish-Norwegian RCT



Torsten Olbers

Professor of Metabolic surgery
Linköping University
SWEDEN



Disclosures

Johnson & Johnson

Advisory board and Educational activities

NovoNordisk

Advisory board and Educational activities

Vivus

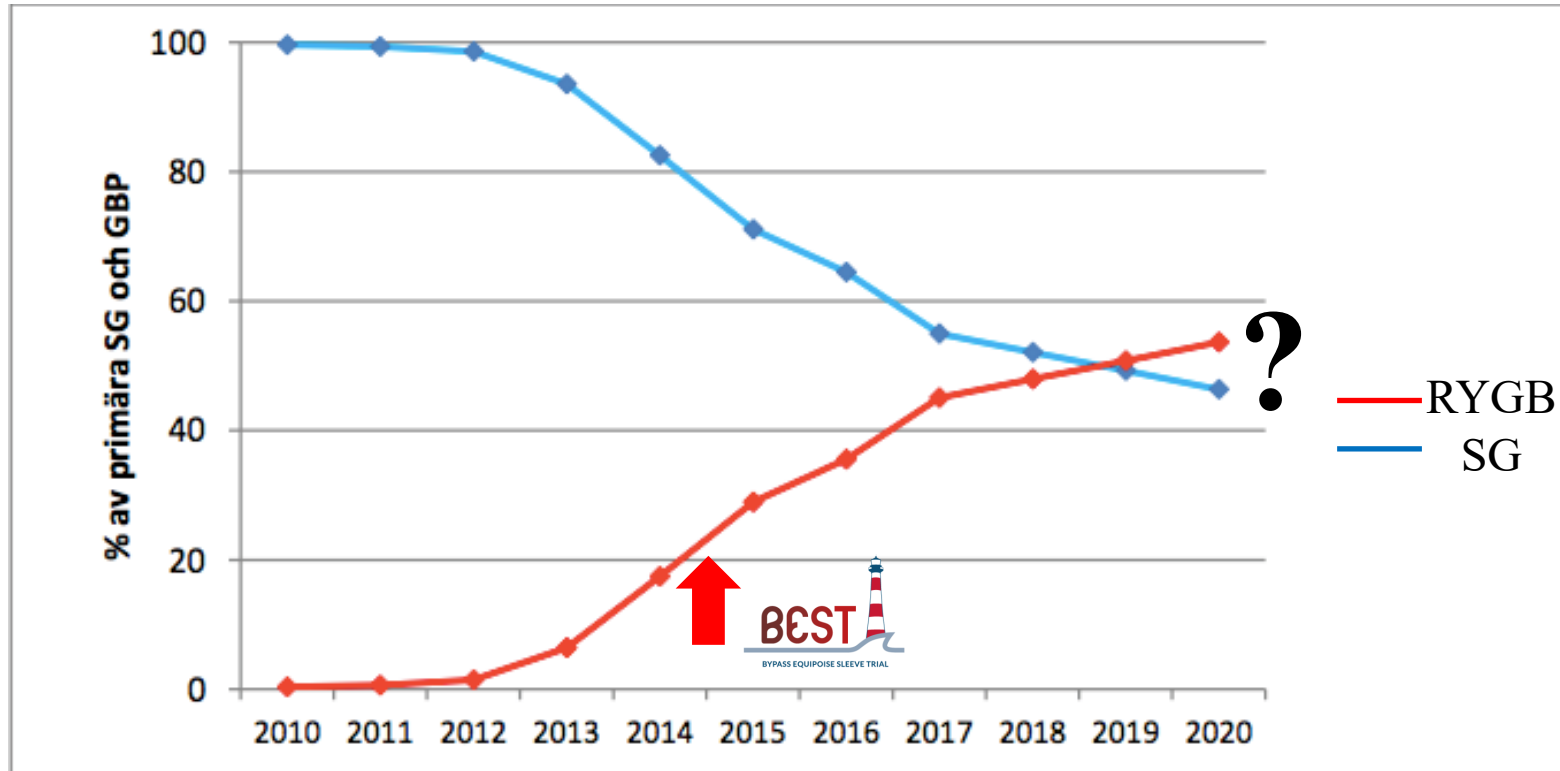
Advisory board

Sandoz

Educational activities

Reimbursement to my institution

Proportion MBS-procedures in Sweden



“ - The patient requests this x technique!”

Our information (preference) is the main influence on patient's preference..

Previous RCTs without a clear answer

SLEEVEPASS (2008-2010)

240 patients

Salminen et al. JAMA 2018

SM-BOSS (2007-2011)

217 patients

Peterli et al. JAMA 2018

SLEEVEBYPASS (2012-2017)

628 patients

Biter LU. Lancet Reg Health Eu, 2024

”Equivalence”



Inclusion criteria:

- >18 years of age
- **BMI 35-50 kg/m²**
- Suitable for both sleeve and gastric bypass

Exclusion criteria:

- Previous bariatric or anti-reflux surgery.
- **Moderate-severe GERD or a known hiatal hernia >4 cm**
- Inflammatory bowel disease



BEST – hypothesis

Combined primary endpoint at **5 years**:

- SG is **non-inferior** as compared to RYGB for weight-loss if <5% difference
- **Superiority** for SG if >35% less substantial adverse events



Substantial adverse event (over 5 years)

- Intervention under general anesthesia (Clavien-Dindo III b or higher)
- Admission to an intensive care unit
- Revisional surgery- conversion or reversal
- In hospital care for complications related to the surgery
- Need of enteral or parenteral supplemental nutrition
- Chronic abdominal pain (>6 months)
- Frequent and severe food-related problems affecting everyday life
- Severe hypoglycemia
- Severe gastro-esophageal reflux or Barrett's esophagus
- Clinically relevant, symptomatic vitamin and/or mineral deficiencies
- Severe anemia

**Either
0 or 1**



Original Investigation | Surgery

Comparison of Sleeve Gastrectomy vs Roux-en-Y Gastric Bypass A Randomized Clinical Trial

Suzanne Hedberg, MD, PhD; Anders Thorell, MD, PhD; Johanna Österberg, MD, PhD; Markku Peltonen, PhD; Ellen Andersson, MD, PhD; Erik Näslund, MD, PhD; Jens Kristoffer Hertel, PhD; Marius Svanevik, MD, PhD; Erik Stenberg, MD, PhD; Martin Neovius, PhD; Ingmar Näslund, MD, PhD; Mikael Wirén, MD, PhD; Johan Ottosson, MD, PhD; Torsten Olbers, MD, PhD; for the BEST Study Group

Febr 2024

	Sleeve gastrectomy	Roux-en-Y gastric bypass
Number of patients	<u>878</u>	<u>858</u>
Women	660 (75.2)	622 (72.5)
Age, years	42.9 (11.3)	43.0 (11.0)
Weight, kg	117 (18)	118 (18)
Height, cm	169 (9)	170 (9)
BMI, kg/m ²	40.8 (3.7)	40.9 (3.8)
Waist circumference, cm ^b	123 (13)	125 (13)
Diabetes	106 (12.1)	118 (13.8)
Dyslipidemia	116 (13.2)	111 (12.9)
Hypertension	251 (28.6)	259 (30.2)
Sleep apnea	124 (14.1)	118 (13.8)
Dyspepsia	36 (4.1)	42 (4.9)
Depression	124 (14.0)	107 (12.5)
Prior DVT or PE	27 (3.1)	19 (2.2)
Smoking ^a	74 (8.5)	95 (11.1)

Baseline

Adverse Events – 30 days

Any Adverse Event

SG: 40/878 (4.6%) vs. RYGB: 54/857 (6.3%) p=0.11

OR 0.71 (95% CI 0.47–1.08).

Severe Adverse Events (Clavien-Dindo

SG: 15/878 (1.7%) vs. RYGB: 23/857 (2.7%) p=0.19

OR 0.63 (95% CI 0.33–1.22).

No mortality (90d)

Conclusion- perioperative risk

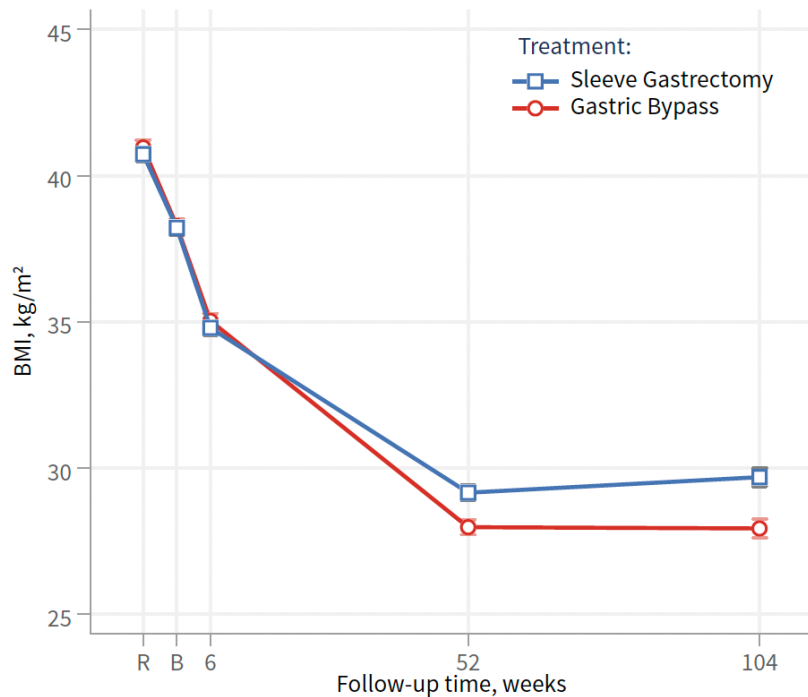
Sleeve and RYGB can both be performed safely, and with a comparable perioperative risk.



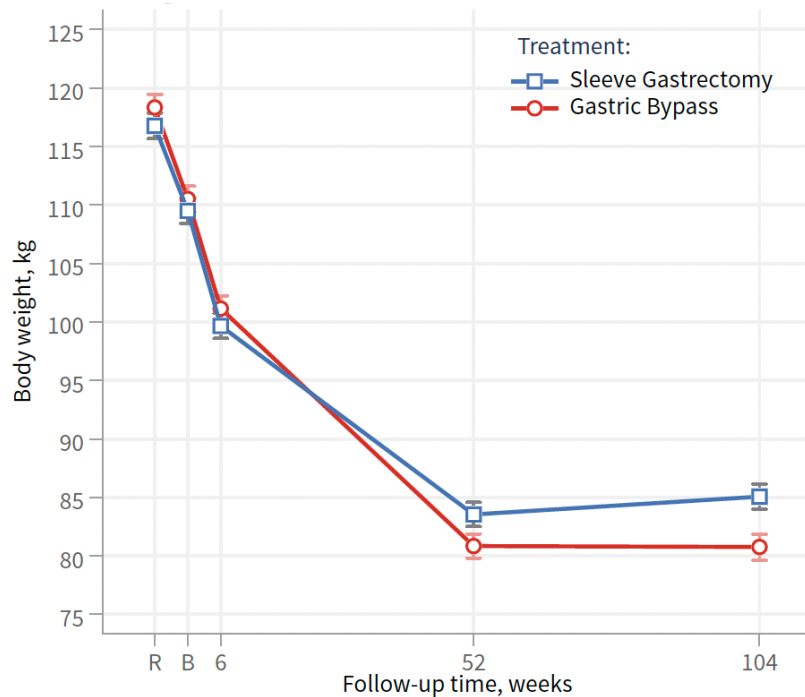
Two-year outcomes

Weight loss

Body Mass Index



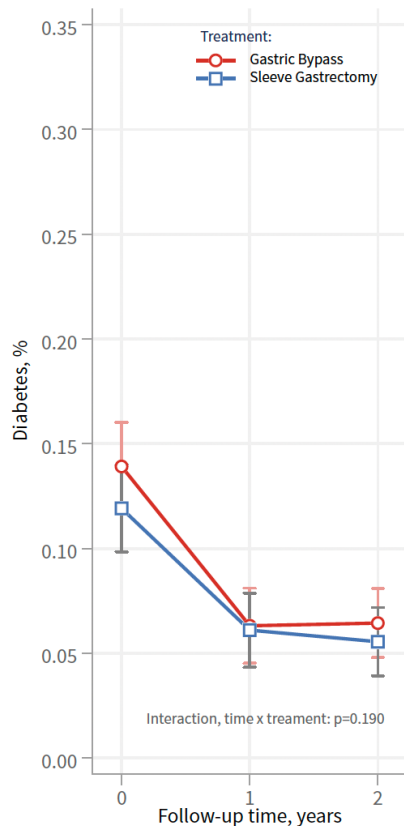
Body weight



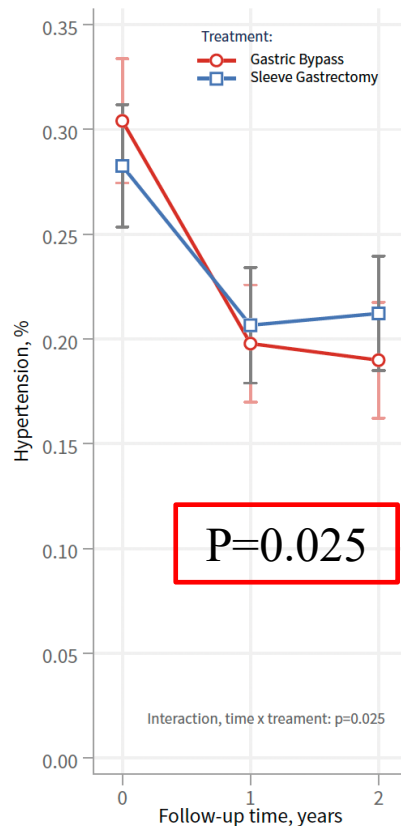
Unpublished

Co-morbidities

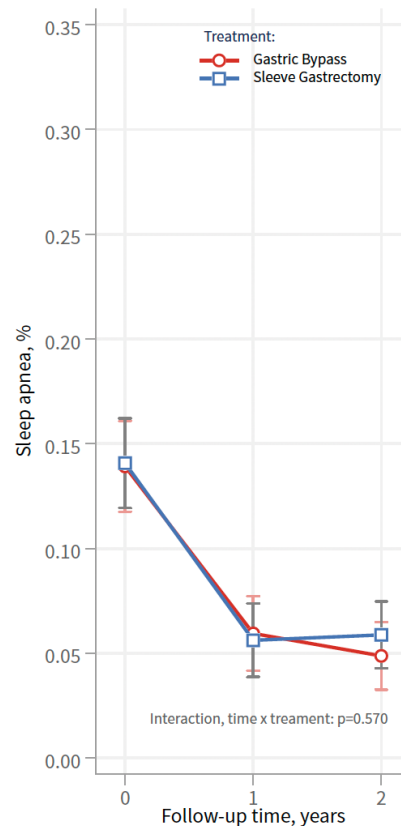
Diabetes



Hypertension

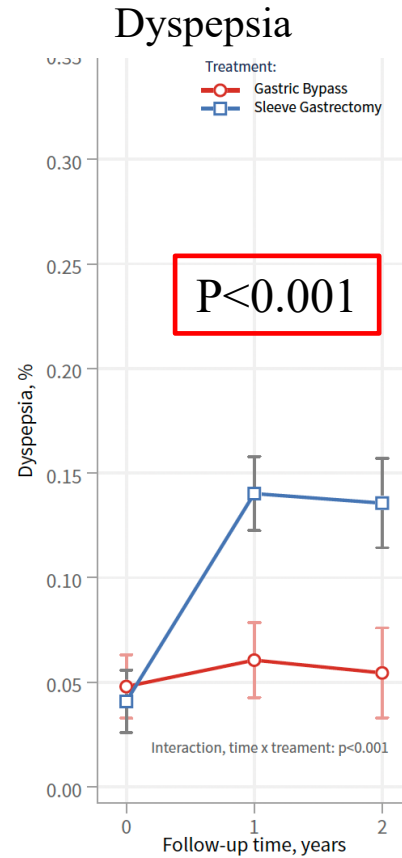
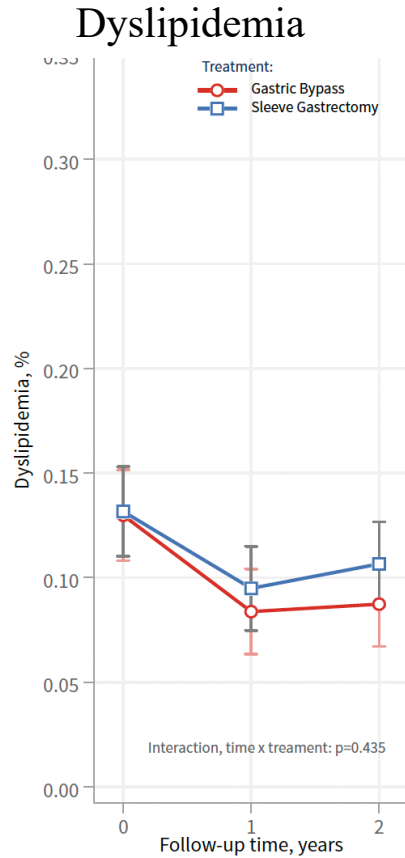


Sleep apnea



Unpublished

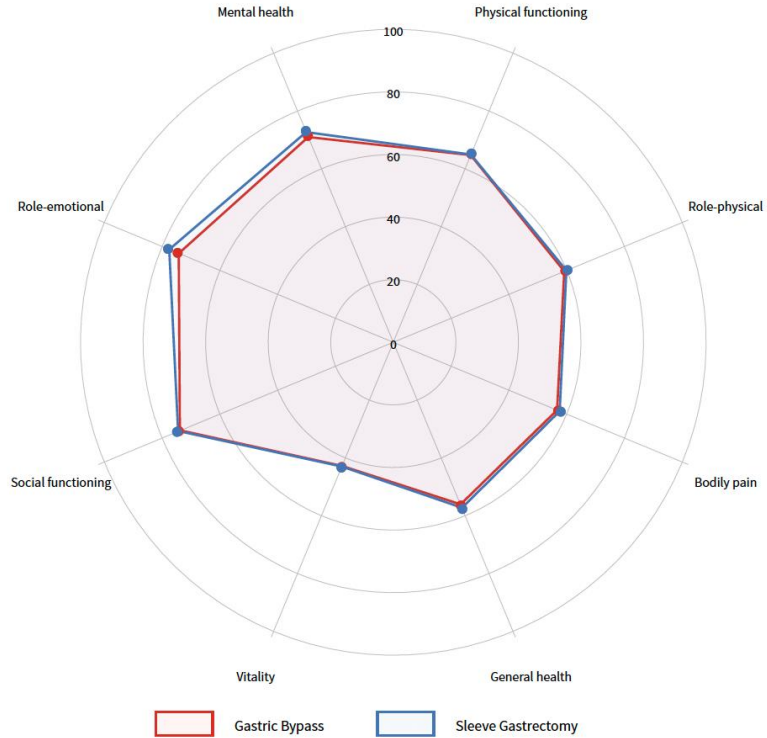
Co-morbidities



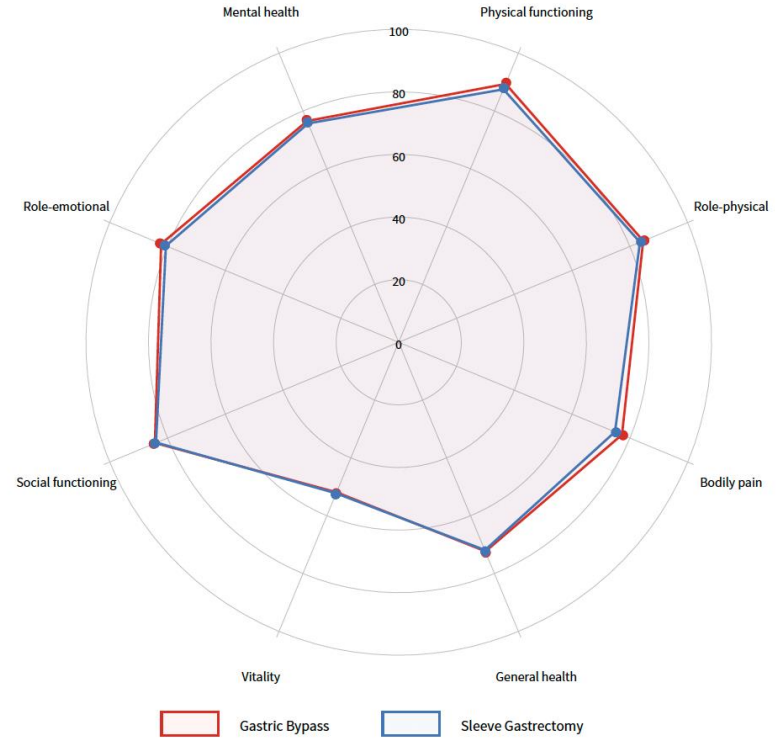
Unpublished

Quality of Life

Baseline



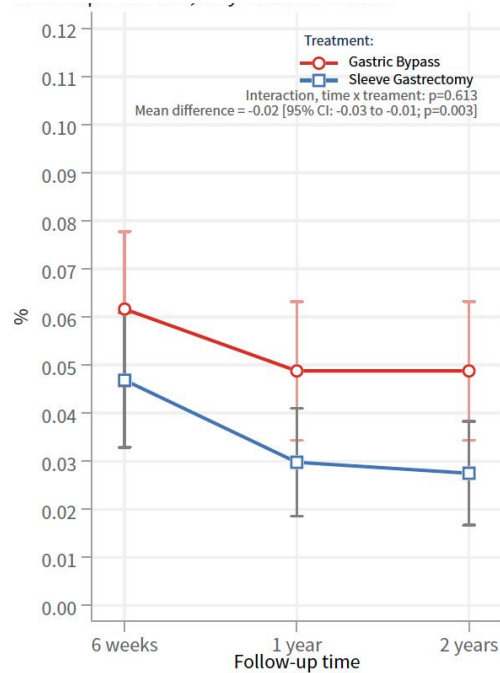
2 year



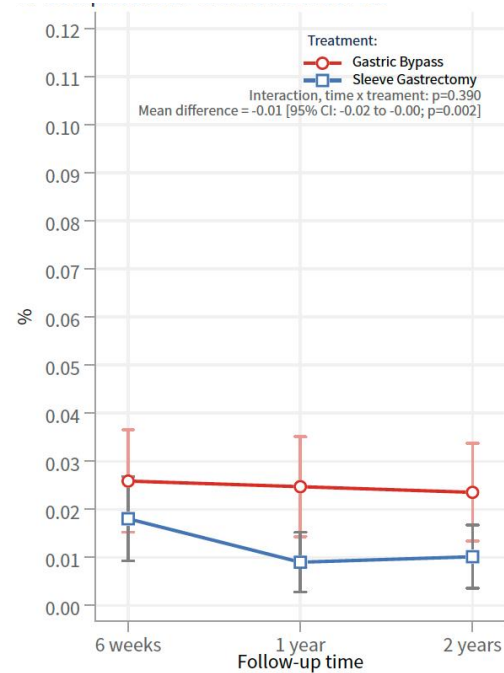
Unpublished

Complications

Any complication



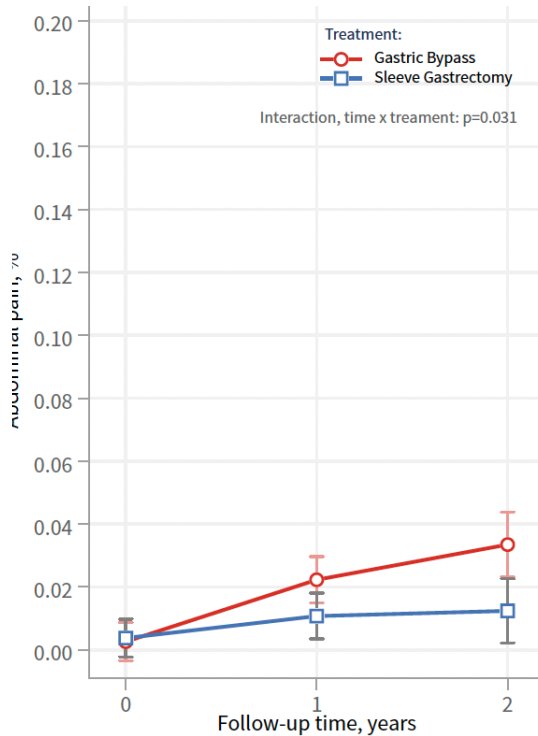
Clavien-Dindo $\geq 3B$



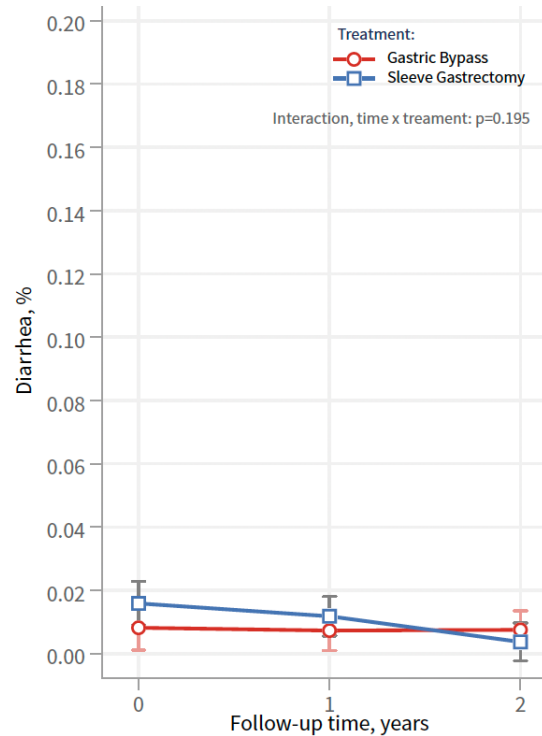
Unpublished

Gastro-intestinal problems

Abdominal pain



Diarrhea

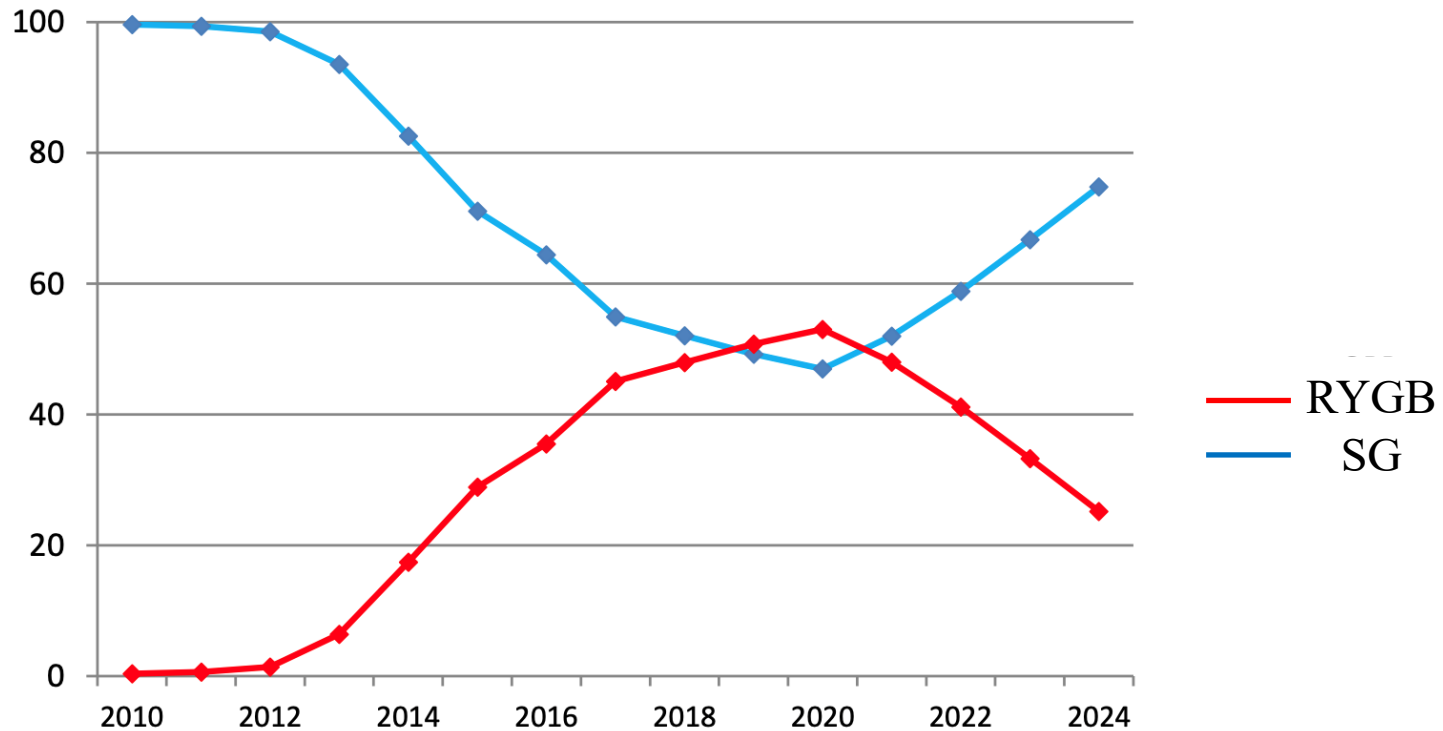


Conclusions- 2-year outcome

- Excellent short term weight-loss after both procedures
- RYGB has superior effect on hypertension
- Similar improvements in quality of life
- SG is associated with more dyspepsia.
- Low risk of complication after both procedures



Proportion MBS-procedures in Sweden



A big thank to BEST collaborators!

Trial Steering Committee: Anders Thorell, Johan Ottosson, Johanna Österberg, Ellen Andersson, Erik Näslund, Martin Neovius, Suzanne Hedberg, Jarl Torgerson, Erik Stenberg, Anna Laurenius, Marius Svanevik, Jens Kristoffer Hertel, Markku Peltonen, Torsten Olbers



- Ersta
- Mora
- Norrköping
- Lindesberg/Örebro
- Skövde
- SU/Östra
- Kalmar
- Ljungby
- Södertälje
- Danderyd
- Tönsberg

- Falun
- Uppsala
- Lycksele
- Hudiksvall-Gävleborg
- Södersjukhuset
- Torsby
- Sankt Göran
- GB Obesitas
- Bodö



Surgical philosophy..

- A winding journey for laparoscopic RYGB
- Change to a new technique or improve the “gold standard”?
- Today a RYGB 2.0 (maturity)
- Sleeve: from Why not? to Why?