

PALERMO, 13 - 14 MARZO 2025

**IL TRATTAMENTO
INTEGRATO DELL'OBESITÀ
CHIRURGIA, ENDOSCOPIA E FARMACI
UNA SINERGIA VINCENTE**

Resp. Scientifico Antonino Granata
Presidente del congresso Cosimo Callari



Weight Regain o Insufficient Weight Loss

Ruolo della Chirurgia: Ha ancora Senso ???

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Decision Making

- Weight Regain $> 25\%$
- Insufficient Weight Loss $< 50\%$
- Persistence of Co-morbidities with adequate weight loss
- Persistence of Co-morbidities with weight Regain or insufficient weight loss.

No Guidelines for each individual case

Decision Making

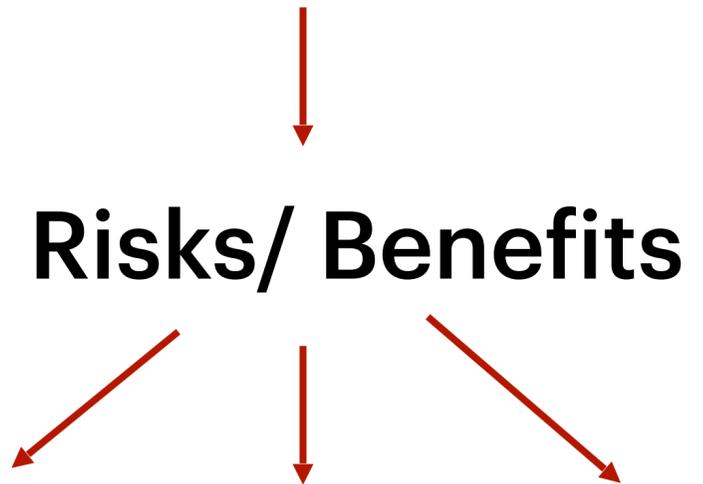
No Guidelines for each individual case



- Age patient
- Emergence of new pathologies
- Type of primary Surgery
(restrictive or malabsorptive)
- Changes on Eating Habits
- Life Style changes



Multidisciplinary Assessment



Medical Therapy

Endoscopic Therapy

Surgery

Revisional Bariatric Surgery

Todd Andrew Kellogg, MD

be judged in the context of the presence or absence of comorbid disease. Before considering whether a particular individual is a candidate for a revision of the primary operation, it is important to determine whether the operation failed the patient or whether the patient failed the operation; whether there is there an anatomic cause for the weight regain or the weight regain is primarily a result of behavioral discrepancies such as large portion sizes, high caloric foods, snacking between meals, and lack of exercise. It is imperative that these issues be determined before considering revisional surgery or there will be repeated failure of the operation to provide weight loss or to control weight regain. It should also be considered and accepted that, as



**Failure due to
Anatomical or Patient
causes**

with many other diseases, not everyone can be cured of their obesity; there is a group of nonresponders who are resistant to weight loss despite the surgeon's best efforts.

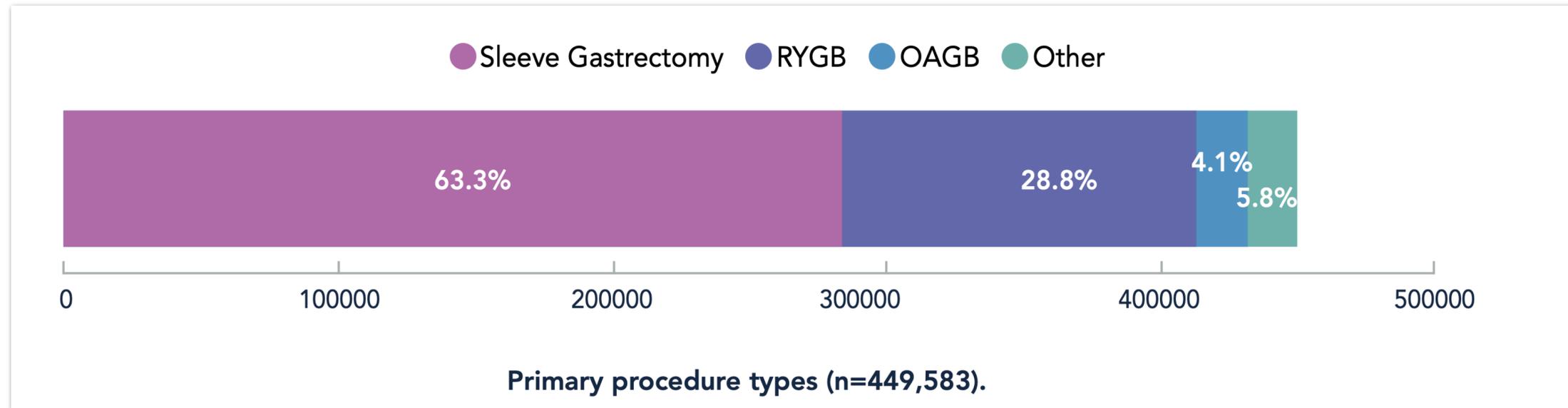


Non-responders groups

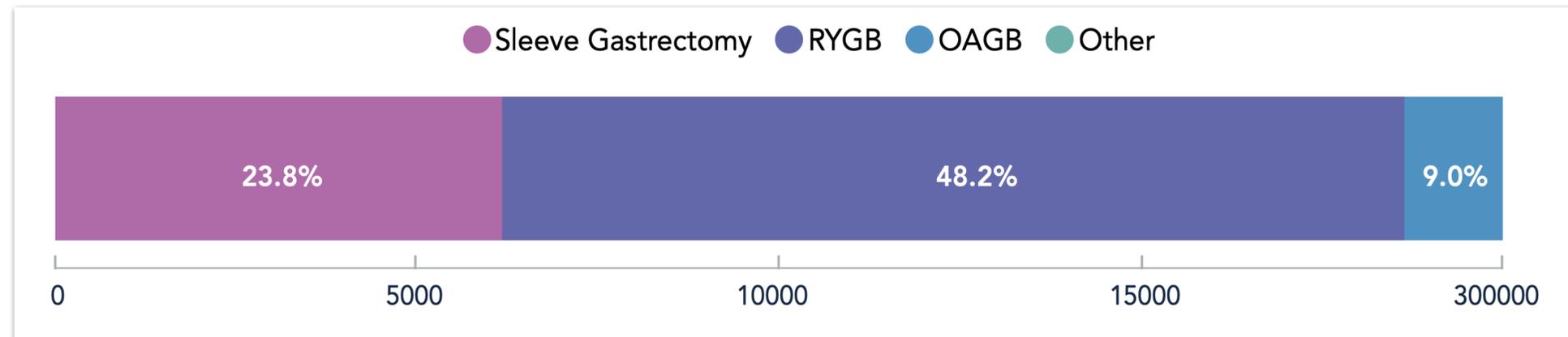


Medium and Long-Term Weight Loss After Revisional Bariatric Surgery: A Systematic Review and Meta-Analysis

The 8th IFSO Registry Report showed an estimate that RBS accounts for 6.5% ($n = 25,592$) of all bariatric interventions ($n = 480,970$)



revisional bariatric surgery (RBS)





Medium and Long-Term Weight Loss After Revisional Bariatric Surgery: A Systematic Review and Meta-Analysis

Revisional Bariatric Surgery

- ☑ There is still **no consensus on a revisional approach** in cases of insufficient weight loss (IWL) or recurrence of obesity
- ☑ The fact is that an RBS is generally a **technically challenging procedure, with a higher risk of complications and debatable results, especially in the long term**



Medium and Long-Term Weight Loss After Revisional Bariatric Surgery: A Systematic Review and Meta-Analysis

Twenty-eight observational studies ($n = 2213$ patients) were included.

Follow-up > 2 years

Results

BMI

Twenty-three studies, covering 1602 patients, reported BMI values before and after RBS. **Reduction of 10.2 points in BMI after at least two years of revisional procedure**

%EWL

Eighteen studies ($n = 1031$ patients) assessed the percentage of excess weight lost after revisional surgery. **The meta-analysis showed a loss of 54.8% of excess body weight after at least 2 years of revisional procedure**

%TWL

Based on data from 16 studies with 888 cases, the reported mean **percentage of total weight loss (TWL) was 27.2% after at least 24 months of the revisional procedure**

Outcomes of revisional surgery options after inadequate sleeve gastrectomy: A comprehensive network meta-analysis

Insufficient weight loss
Worsening or development of de novo gastroesophageal reflux disease (GERD)
Persistence of associated complications such as type 2 diabetes mellitus (T2DM) and hypertension

Prevalence of revisional bariatric surgeries 16.8%

18,674 patients

The investigated revisional surgeries were

RYGB (in 13,249 patients)

Re-Sleeve gastrectomy (re-SG; in 1853 patients)

BPD/DS (in 1716 patients)

Single anastomosis duodenal-ileal bypass (SADI; in 1021 patients),

OAGB (in 767 patients),

AGB (in 68 patients)

Outcomes of revisional surgery options after inadequate sleeve gastrectomy: A comprehensive network meta-analysis

Major complications

re-SG was associated with the highest rate of complications (13.1%)

Comorbidities remission

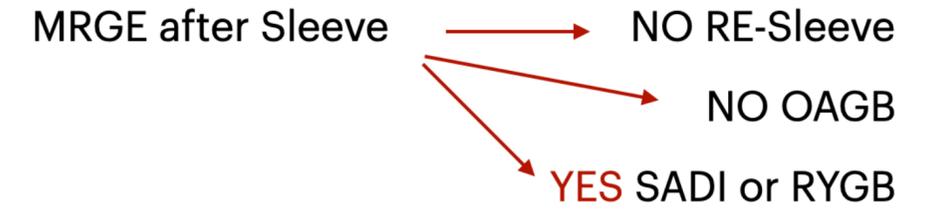
The remission and/or improvement of T2DM and hypertension, Dyslipidemia and OAS

meta-analysis of the studies assessing co- morbidity remission revealed no statistically significant difference among different surgeries

Weight loss

% TWL	1 year End of FU	SADI > OAGB- RYGB OAGB-BPD/DS - SADI > RE-Sleeve
% EWL	1 year End of FU	SADI > OAGB SADI > RYGB-OAGB-Re-Sleeve

Outcomes of revisional surgery options after inadequate sleeve gastrectomy: A comprehensive network meta-analysis



% EWL / % TWL → SADI and OAGB > Rygb

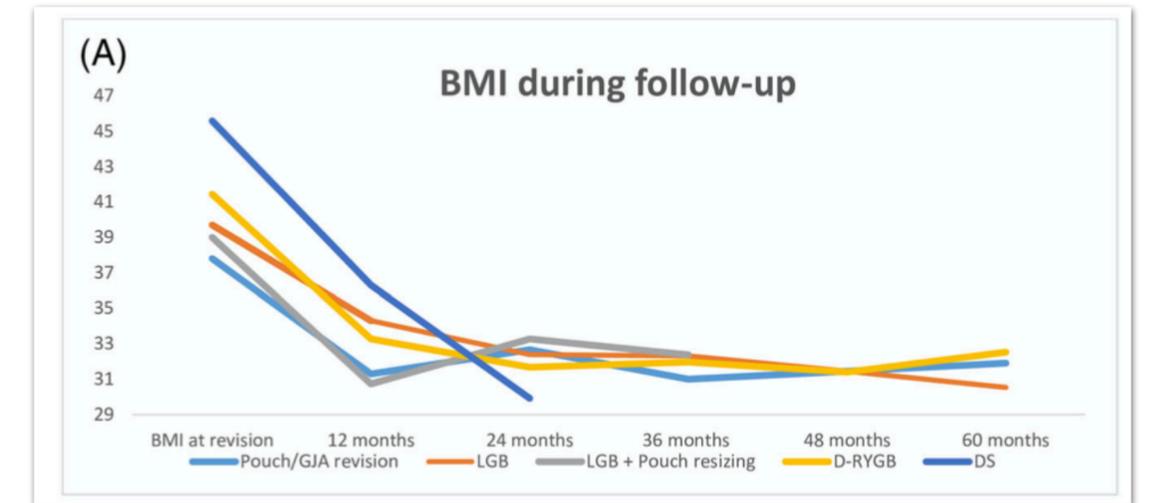
.... "One critical reason for the failure of gastric sleeves is the improper indication for the procedure".....

**Efficacy and safety of revisional treatments for weight regain or insufficient weight loss after Roux-en-Y gastric bypass:
A systematic review and meta-analysis**

5% to 35% of patients experience inadequate weight loss (IWL) or weight regain (WR) after RYGB

- ☑ **Preoperative factors** associated with WR and IWL include a high initial body mass index (BMI), personality disorders, presence of type 2 diabetes, and old age
- ☑ **Postoperative predisposing** factors are loss of follow-up, metabolic and hormonal imbalance, psychiatric comorbidities and use of psychiatric drugs
- ☑ **Causes associated with anatomy** are dilated gastro-jejunal anastomosis (GJA), enlarged gastric pouch and gastro-gastric fistula

**Efficacy and safety of revisional treatments for weight regain or insufficient weight loss after Roux-en-Y gastric bypass:
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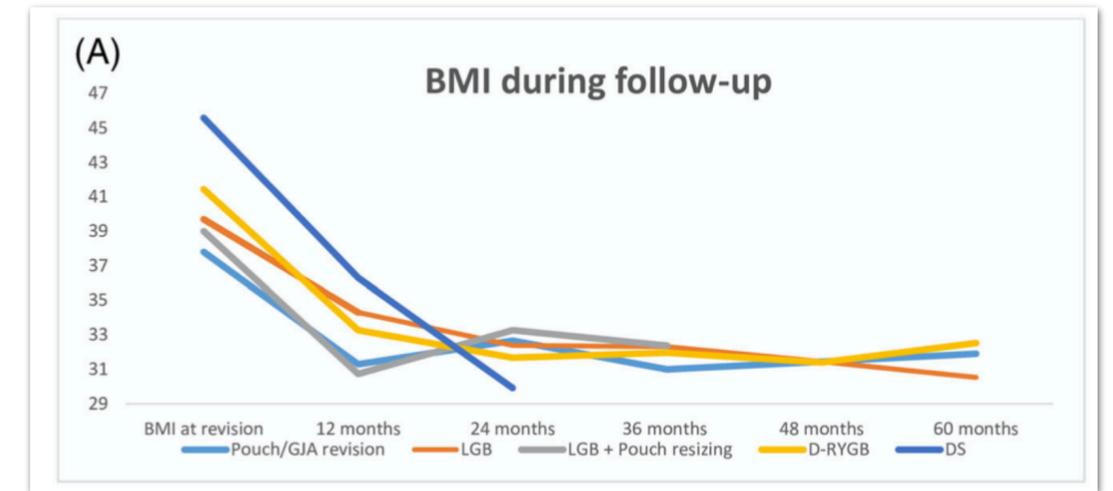


Re-Do

- Pouch/gastro-jejunal anastomosis (GJA) revision
- Laparoscopic gastric banding (LGB)
- LGB + pouch resizing
- Distalization of the Roux-en-Y gastric bypass (D-RYGB)

Efficacy and safety of revisional treatments for weight regain or insufficient weight loss after Roux-en-Y gastric bypass: A systematic review and meta-analysis

Results



Pouch/GJA revision

%TWL was 17.2 - 13.6 - 18.0 and 15.6 after 12, 24, 36, and 60 months, respectively

LGB + pouch resizing

% TWL was 21.2 and 17.0 after 12 and 36 months

A total of 13 reoperations (17.3%) were reported, of which 10 band were removals (13.3%)

LGB

%TWL was 13.6 - 18.4 - 18.6 - 20.8 and 23.1 after 12, 24, 36, 48, and 60 months, respectively

D-RYGB

%TWL was 19.7 - 23.6 - 22.9 -24.2 and 21.5 after 12, 24, 36, 48, and 60 months, respectively.

Complications were reported in 225 patients (51.8%).
Reoperations were described in 91 cases (21.0%), of which 65 were undo procedures (15.0%)

Efficacy and safety of revisional treatments for weight regain or insufficient weight loss after Roux-en-Y gastric bypass: A systematic review and meta-analysis

Conclusion

✓ **Pouch or GJA revision was effective on short term follow-up.**

✓ Percentage TWL was 17.2 after 12 months and remained 15.6 after 60 months.

Complications were anastomotic leakage (6%) and GI-stenosis (3.4%)

✓ **LGB was effective as a revisional procedure with a %TWL of 13.6 and 23.1 after 12 and 60 months, respectively.**

In this study, durable weight loss was found.

It is hypothesized that additional placement of a ring prevents long-term WR due to dilatation of the gastric pouch.

✓ **Combination of LGB and pouch resizing led to a %TWL of 21.2 and 17 after 12 and 36 months, respectively**

✓ **D-RYGB showed a %TWL of 19.7 and 21.5 after 12 and 60 months, respectively.**

Severe nutritional deficiencies were reported in 18% of cases

✓ **Surgical techniques are effective on short and mid-term but are associated with high complication rates.**

✓ **In case a pouch or GJA is dilated, a restrictive procedure is advisable.**

✓ **In case of a normal pouch or GJA, a malabsorptive procedure could be the treatment of choice.**

Revisional Bariatric Surgery



Table 1
Comparison of primary and revisional Roux-en-Y gastric bypass outcomes

	Primary RYGB (%)	Revisional RYGB (%)
Leak	2.1	3.0
Hemorrhage	1.2	0–4.6
SSI	0.8–1	1–6.5
Stricture	0.2–0.4	0.9–1.8
Ulcer	0.4–2.0	0.9–2.6
Perforation	0.4	0–1.2
Hernia	1.2	7.6
Mortality	0.4	0
Total morbidity rate	6.5	10.3

Conversional Complication

Table 2
Conversional complications

Conversion from	Complication Rate	Complication Categories
Roux-en-Y gastric bypass	7%–44% overall 7.3% reoperation 24% readmit	4.3%–33% stricture 2.7%–22% leak 2.1%–34.5% SSI 4.3% ulcer 1.5%–2.3% hemorrhage 21% incisional hernia
Adjustable gastric band	3.7%–32% overall (16.5% RYGB, 7.7%–32% SG, 4.8%–62% for BPD-DS) 2.3%–6.5% reoperation (7.8% RYGB, 2.0% SG) Intraoperative 14.4%–19.7%	1.7%–13.3% stricture 0.3%–6.89% (1.7%–2.3% RYGB, 2.2%–33% SG) leak 0.9%–20.8% SSI 4.3% ulcer 1.2%–20% hemorrhage 8% incisional hernia
One-anastomosis gastric bypass	5%–35.2% overall	5.88%–7.7% leak 5% SSI 2.38%–17.65% hemorrhage 3.8% stenosis
Sleeve gastrectomy	6.7%–27.8%	2.78% hemorrhage 2.78% obstruction

**METABOLIC OUTCOMES AFTER REVISIONAL BARIATRIC SURGERY: A
SYSTEMATIC REVIEW AND META-ANALYSIS**

Metabolic Outcomes

The aim of this study is to review existing literature on the effects of revisional bariatric surgery on obesity-related co-morbidities such as T2D, hypertension (HTN), hyperlipidemia (HLD) and OSA

Nevertheless, there remain a proportion of patients in which there is a Persistence of obesity related co-morbidities following primary bariatric surgery despite adequate weight loss.

There are indeed studies that demonstrate a positive effect of revisional surgery on obesity-related co-morbidities and support its use for the management of recurrent or refractory diseases

Metabolic Outcomes

Results

Improvement and Remission in T2D

meta-analysis showed

92.0% (95% CI: 85.0% to 97.0%) **improvement in T2D** and **50.0%** (95% CI: 37.0% to 63.0%) **remission in T2D**

Improvement and Remission in HTN

meta-analysis showed

81.0% (95% CI: 70.0% to 90.0%) **improvement in HTN** and **33.0%** (95% CI: 22.0% to 45.0%) **remission of HTN**

Remission in HLD

meta-analysis showed

37.0% (95% CI: 21.0% to 55.0%) **remission of HLD**

Improvement in OSA

meta-analysis showed

86.0% (95% CI: 73.0% to 96.0%) **improvement in OSA**

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Conclusion

There are indeed studies that demonstrate a positive effect of revisional surgery on obesity-related co-morbidities and on Weight regain and [support its use for the management of recurrent or refractory diseases](#)

Surgical techniques are effective on short and mid-term but are associated with high complication rates.

No Guidelines for each individual case

Multidisciplinary Assessment is necessary

