ÚSTŘEDNÍ VOJENSKÁ NEMOCNICE
Vojenská fakultní nemocnice
Praha

Současné možnosti chirurgické léčby obezity

Mojmír Kasalický

Chirurgická klinika 2. LF UK a ÚVN, Praha

BARIATRIE
Bariatrická nebo metabolická chirurgie?

- **Bariatrická chirurgie pro morbidní obezitu** (BMI ≥ 35-40 kg/m²)
  - Hlavní cíl - pokles hmotnosti + zlepšení metabolického stavu.

- **Metabolická chirurgie pro metabolický syndrom** (BMI ≤ 30-35 kg/m²)
  - Hlavní cíl - zlepšení nebo vyléčení metabolického syndromu (T2D) + pokles hmotnosti

- **Pandemie obezity a DM2**
  - ↑ kardiovaskulárních a metabolických onemocnění → ↑ morbidity a mortality

WORLDWIDE SURVEY
Number of procedures 2003-2014

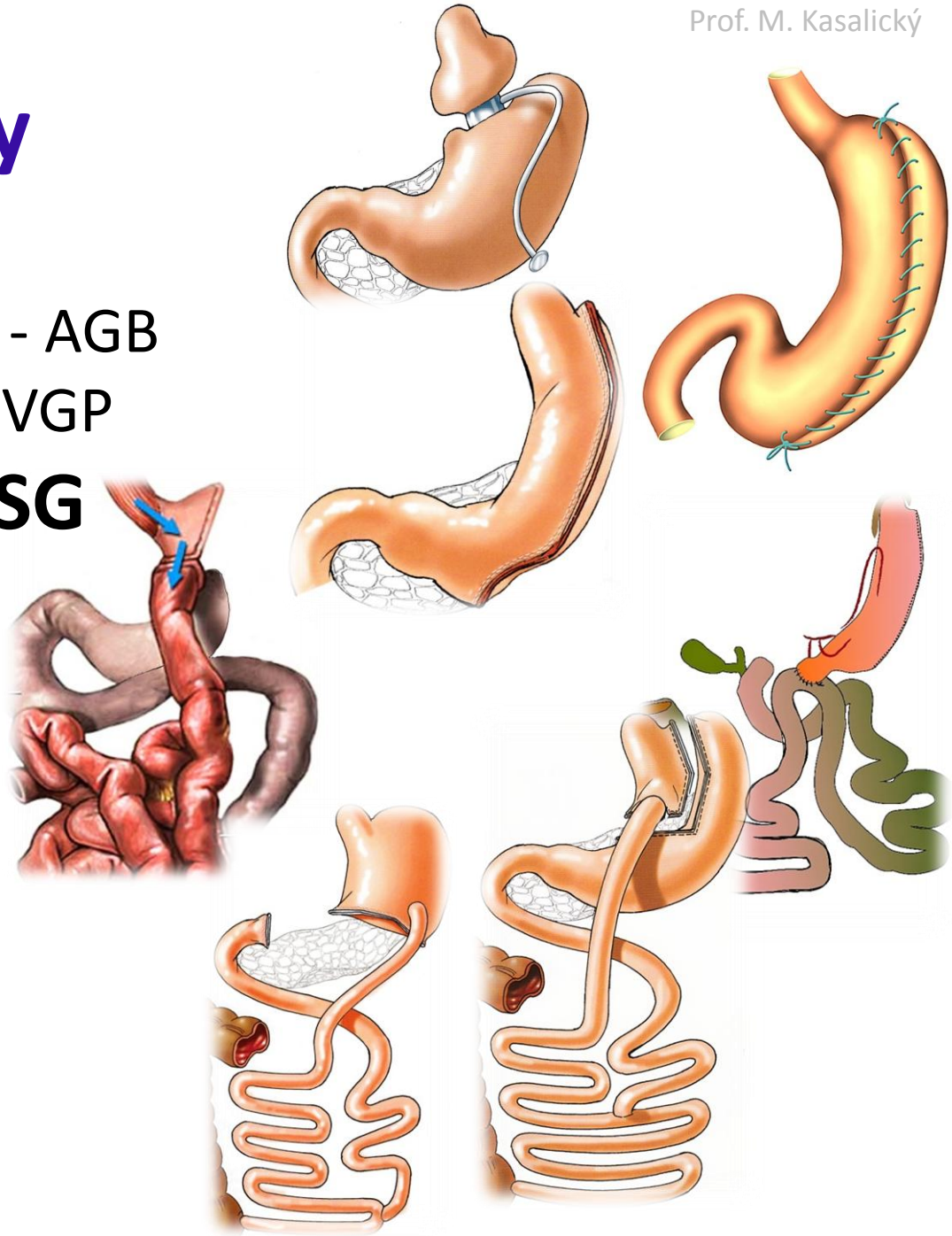
Angrisani 2016

Bariatrie je dnes prováděna především miniinvazívní laparoskopickou metodou!

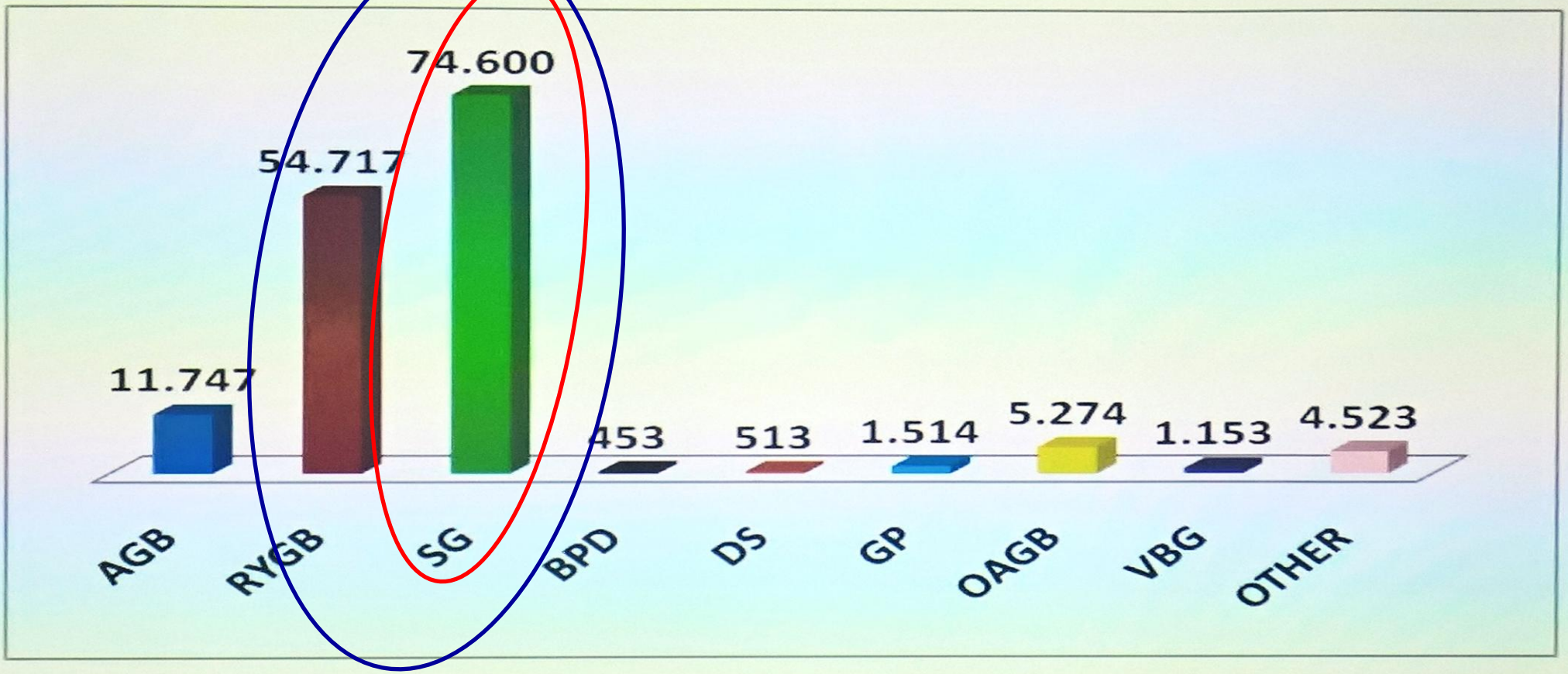
Současné B/M metody

- **Restriktivní operace**
  - Adjustabilní Bandáž žaludku - AGB
  - Vertikální gastrická plikace - VGP
  - **Sleeve gastrectomy - SG**

- **Malabsorbční operace**
  - **Žaludeční bypass**
    - RYGBP, OLGBP
  - Biliopankreatická diverze
    - Scopinaro, Duodenal switch, SADIS



WORLDWIDE SURVEY 2014
Number of procedures in Europe

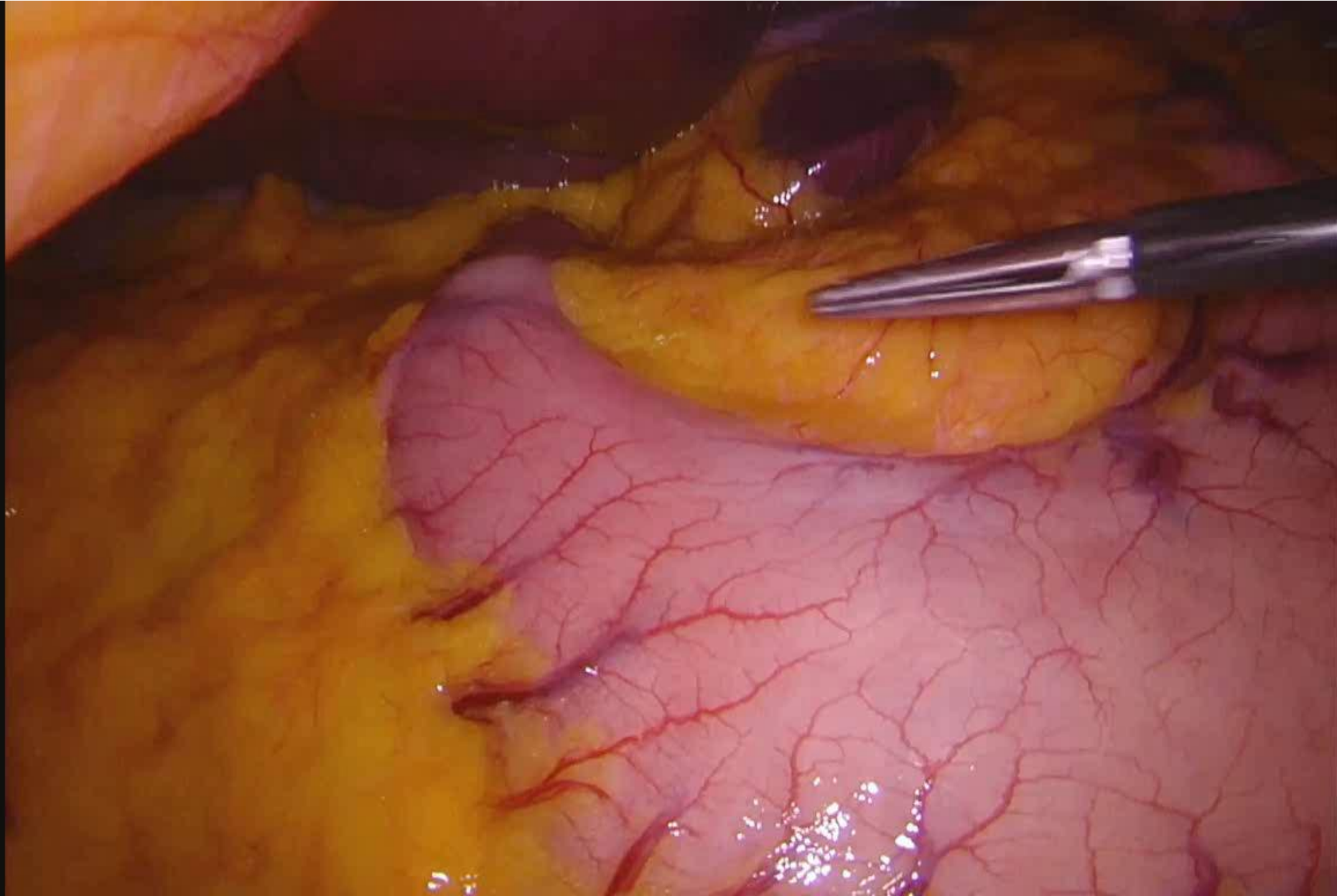


Total N=156508

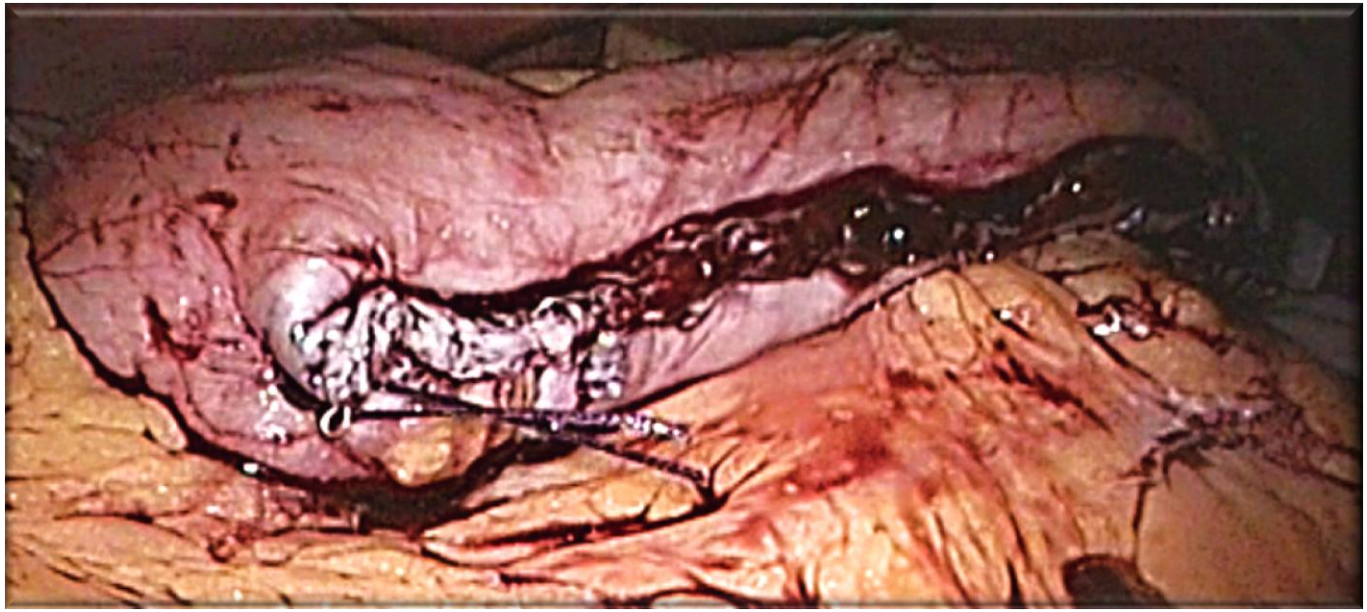
Angrisani 2016

Tubulizace žaludku – Sleeve Gastrectomy

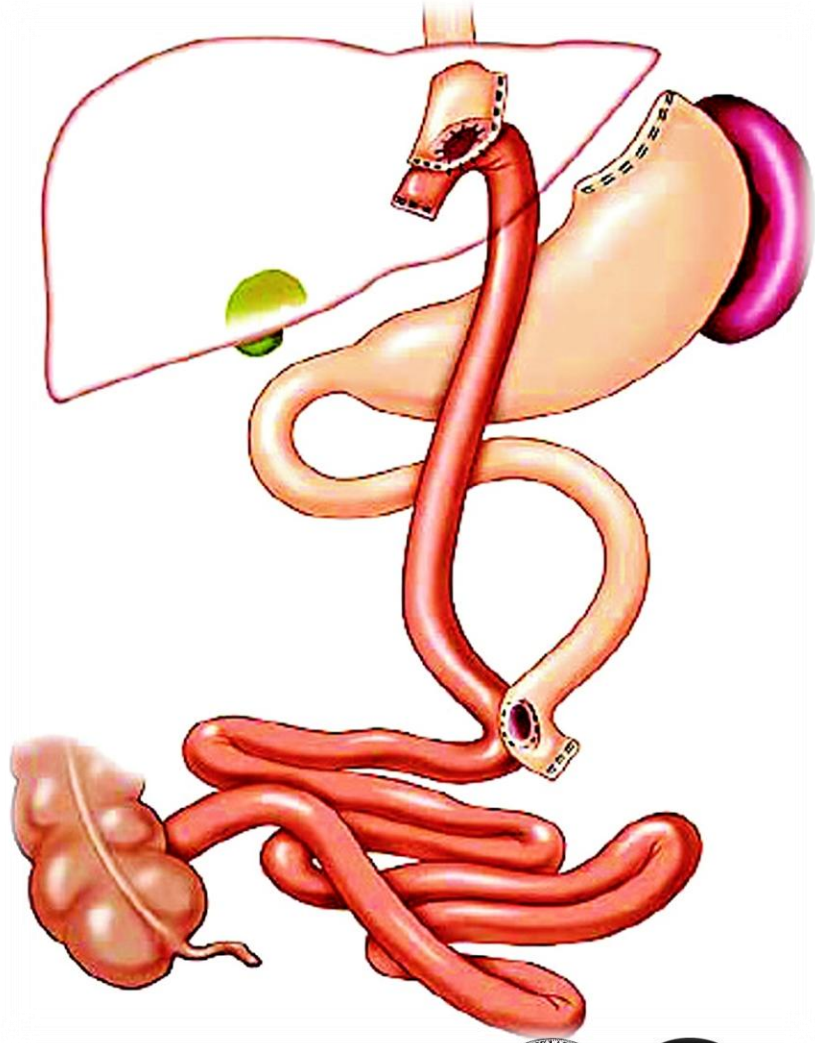
- Odstranění 80-85 % žaludku
  - Reziduální objem 80-160 ml
- S tkání žaludku odstranění buněk produkujících ghrelin
- Zrychlené postprandiální vyprazdňování žaludku
  - Zlepšení DM II
    - Zvýšení sérové hladiny GLP-1
      - Postprandiální stimulace sekrece insulinu

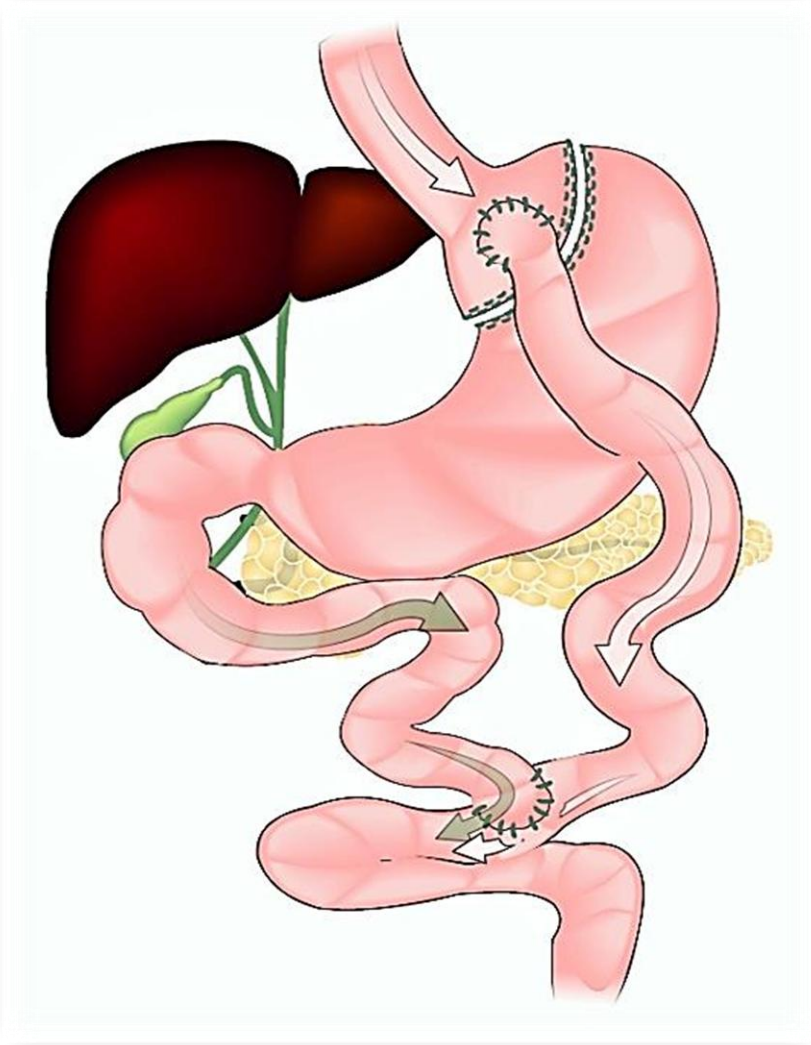


Tubulizace žaludku – Sleeve Gastrectomy

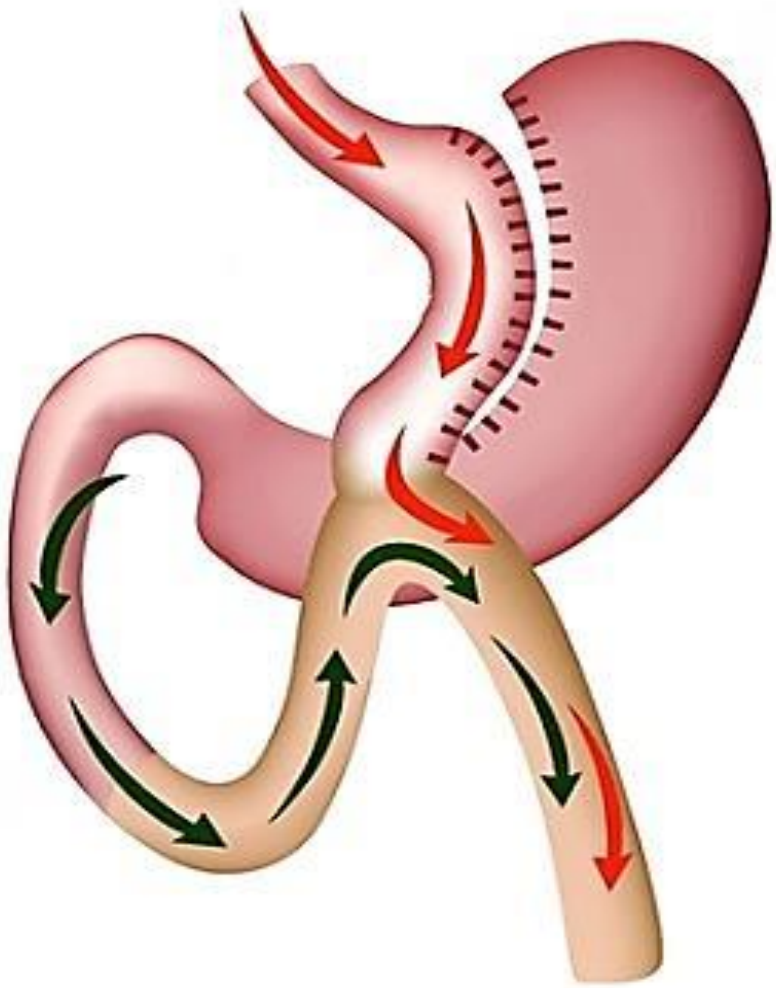


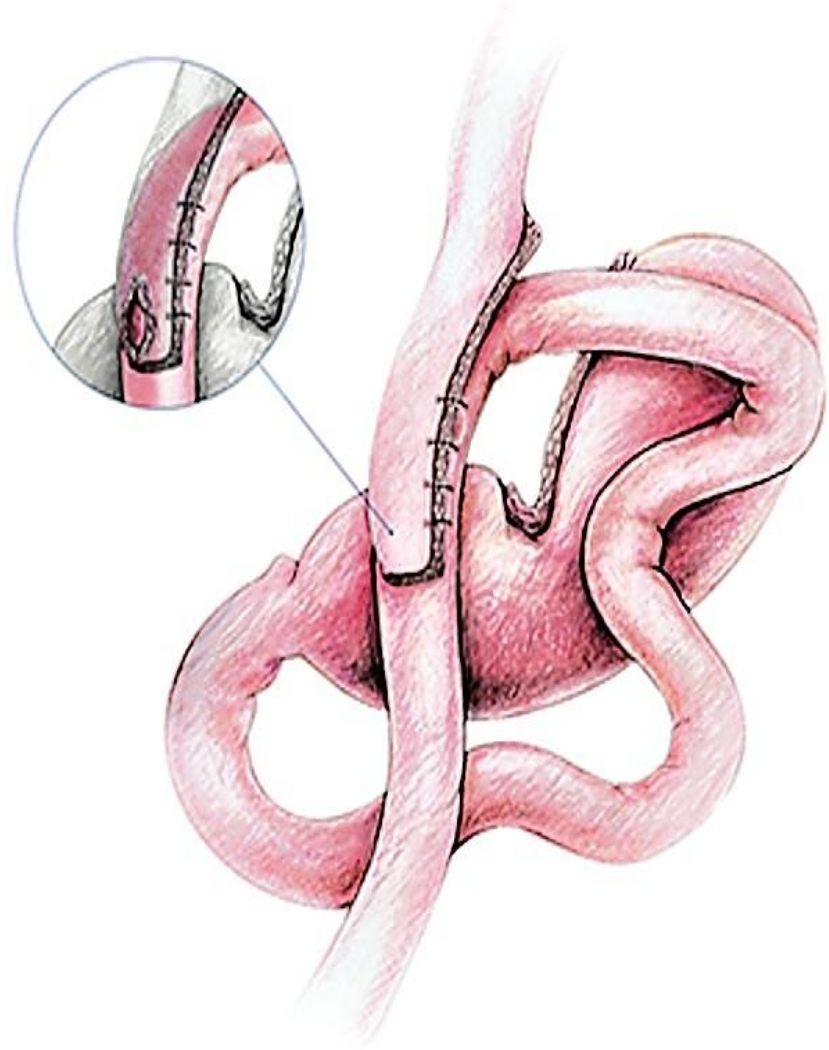
Roux-Y Gastrický Bypass





Ω-loop Gastrický Bypass



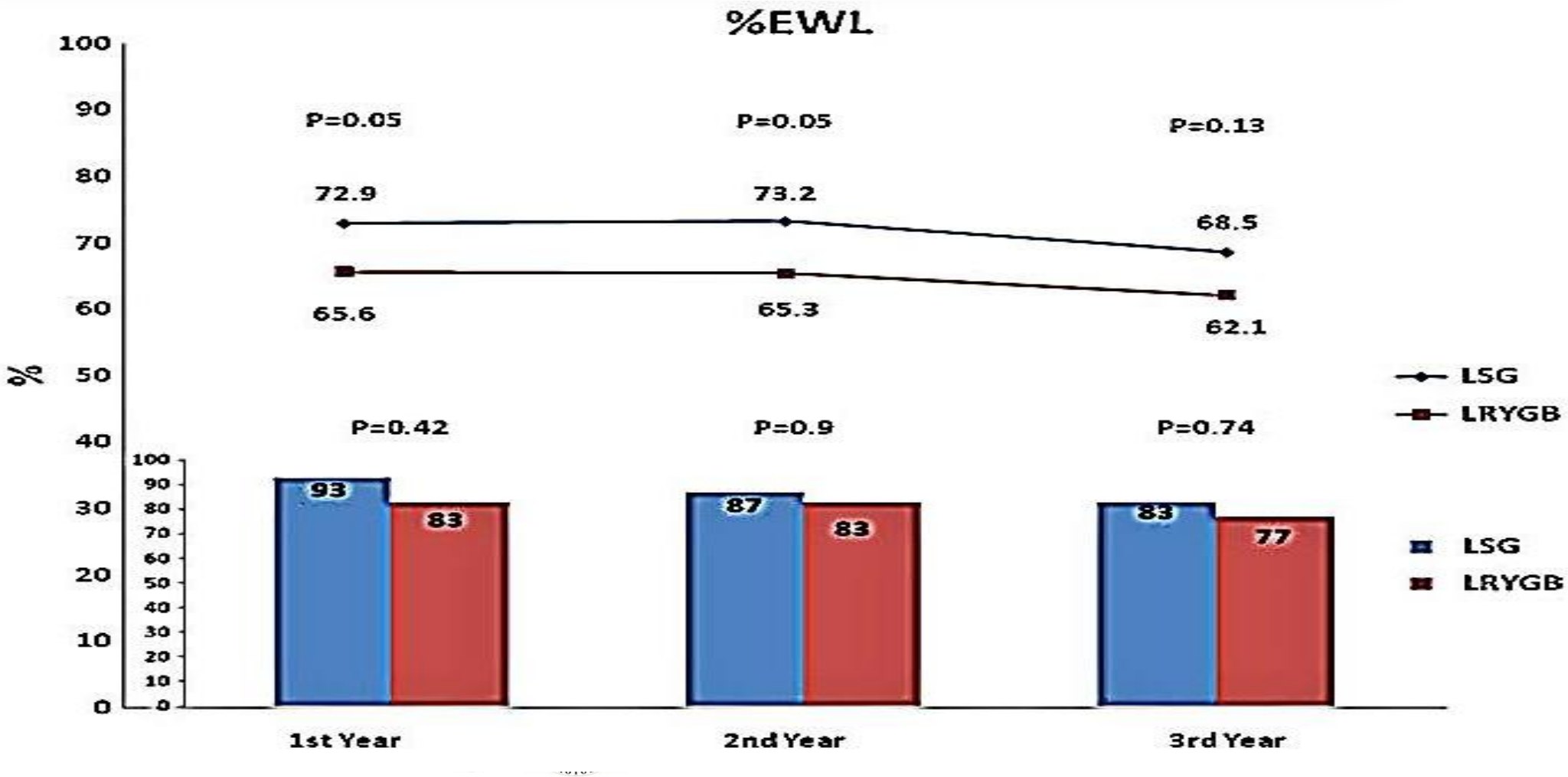


OBES SURG (2011) 21:1650–1656
DOI 10.1007/s11695-011-0479-x

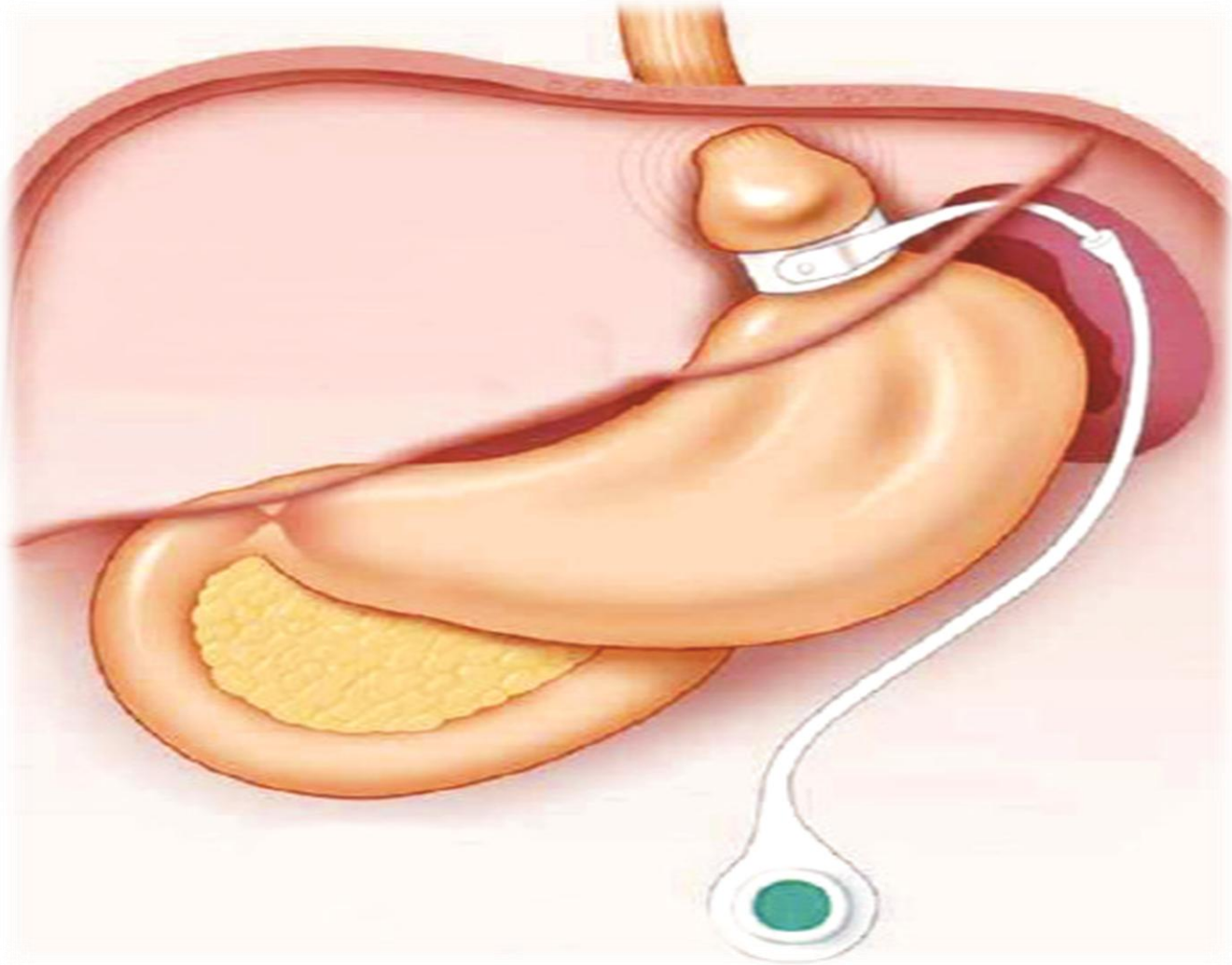
CLINICAL REPORT

Randomized Clinical Trial of Laparoscopic Roux-en-Y Gastric Bypass Versus Laparoscopic Sleeve Gastrectomy for the Management of Patients with BMI<50 kg/m^2

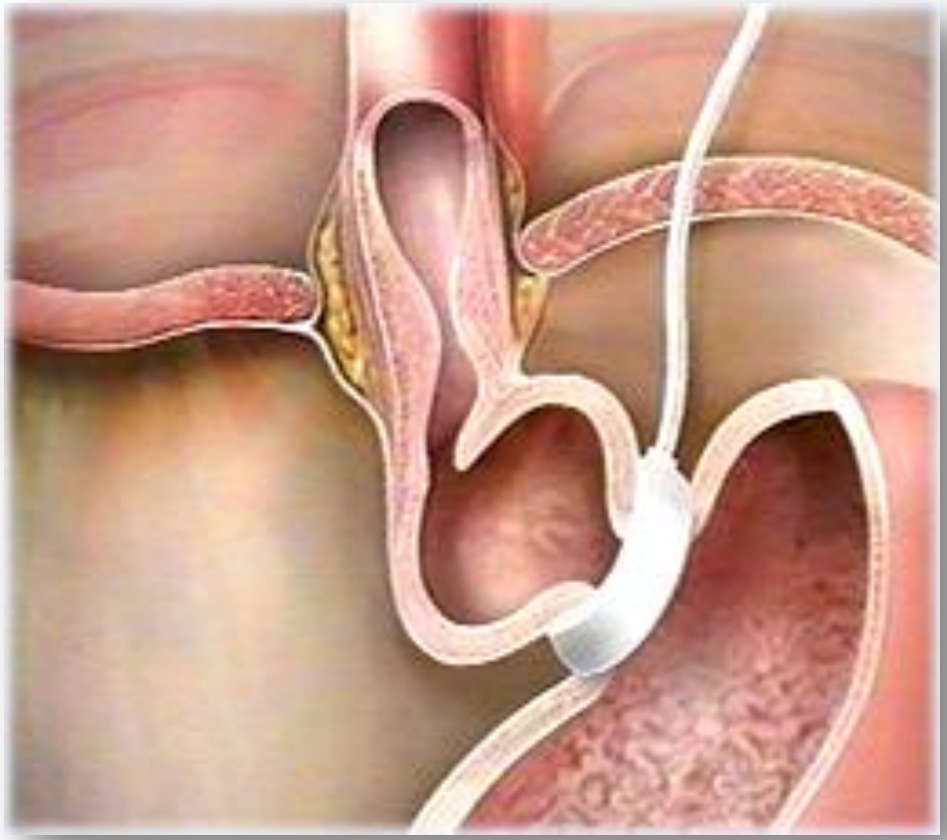
Ioannis Kehagias · Stavros N. Karamanakos ·



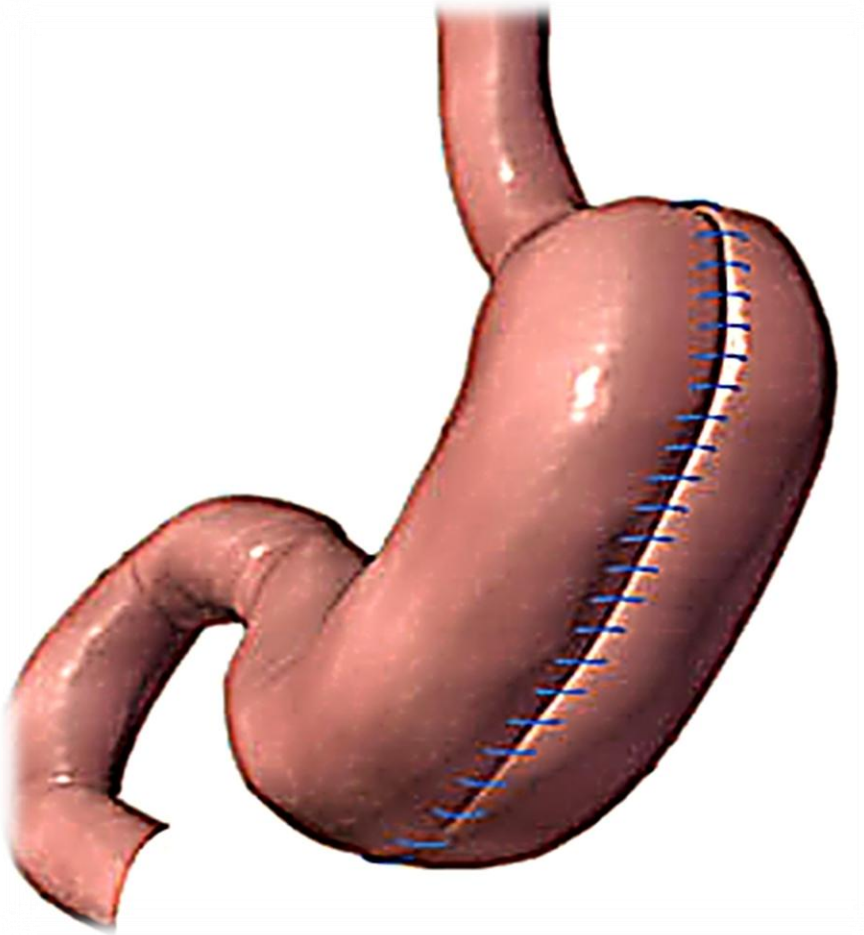
Adjustabilní gastrická bandáž

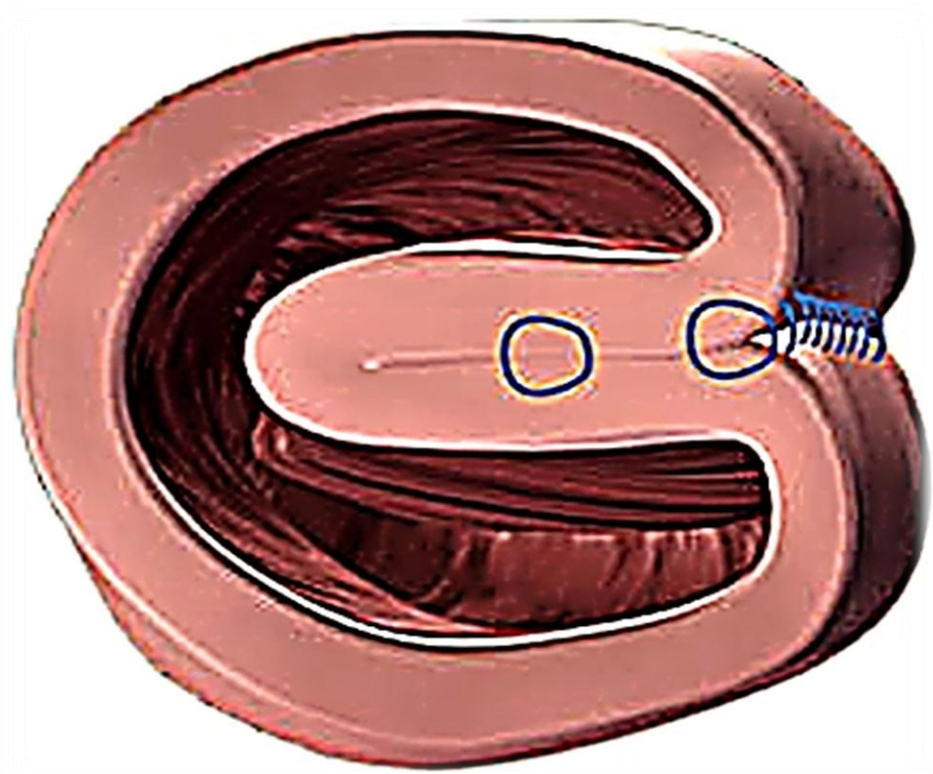


SAGB QC

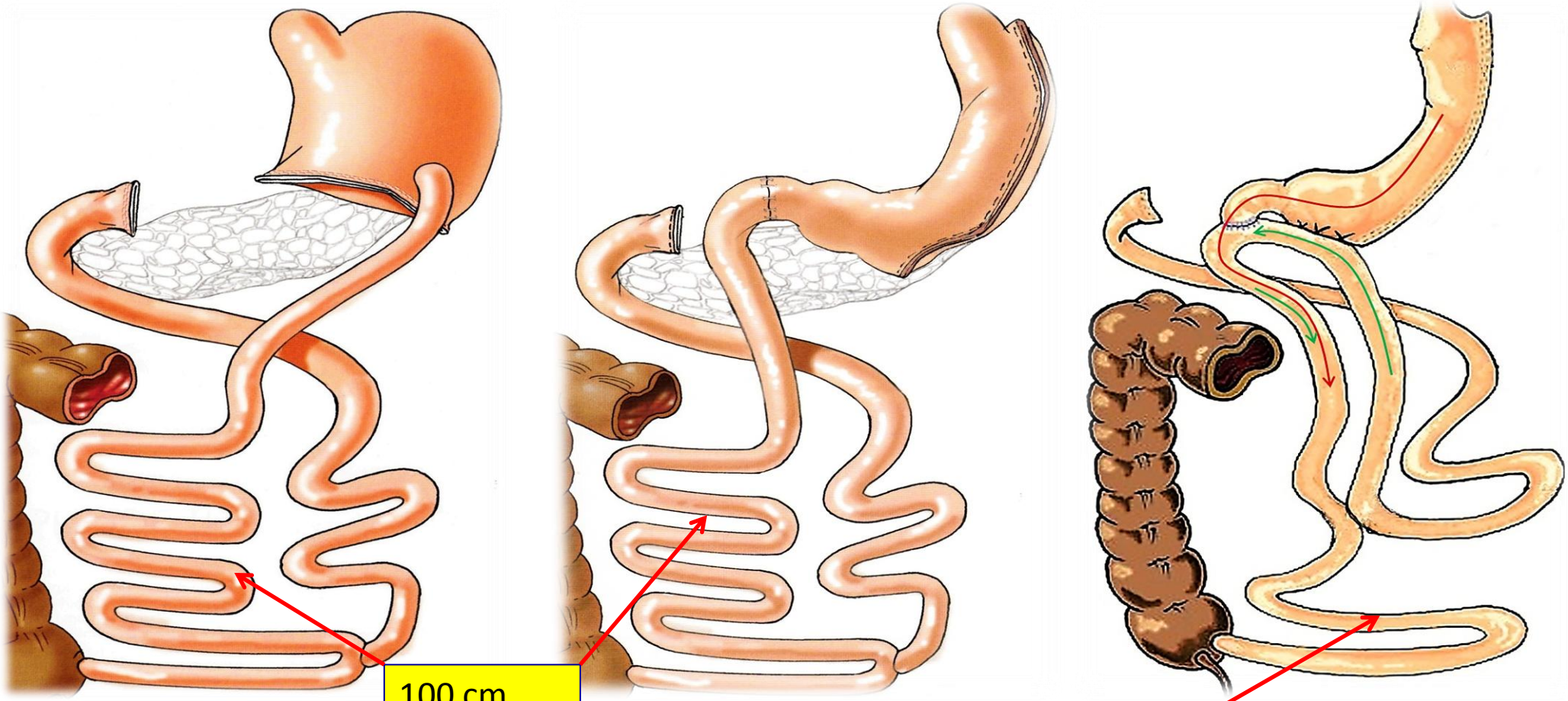


Vertikální gastrická plikace





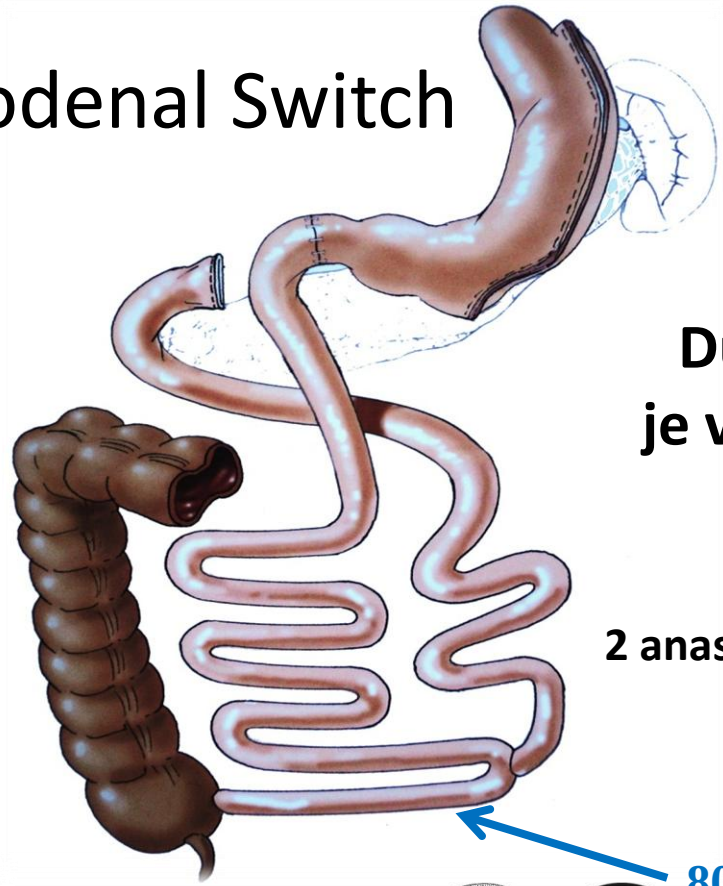
Biliopankreatická diverze x SADIS



Další možnost 2. kroku po SG

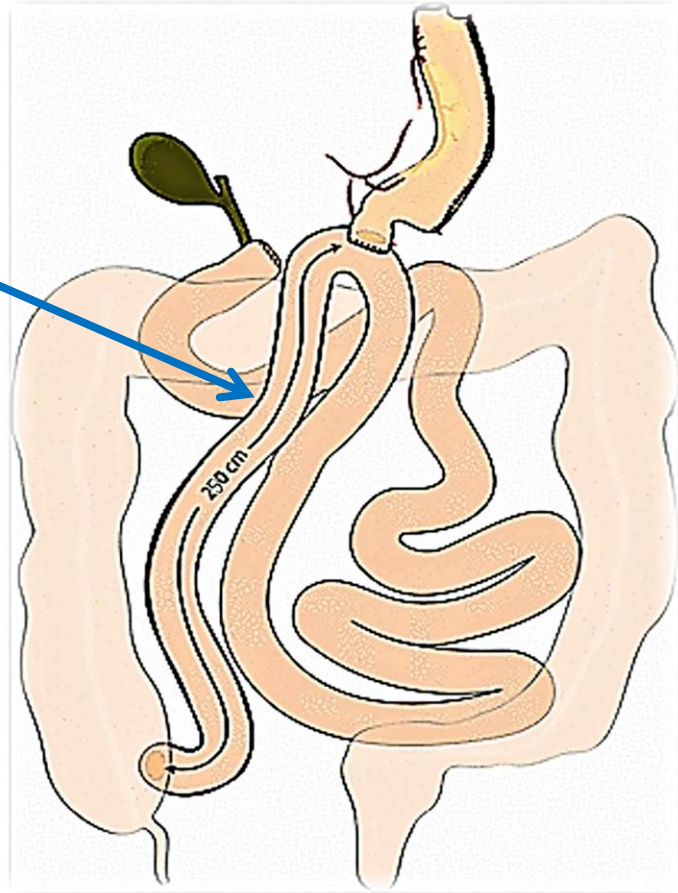
Re-sleeve x Plikace SG x Bandáž SG x GBP x BPD

Duodenal Switch



80 - 100 cm

SADIS



Duodenal Switch je více invazivní než SADIS

2 anastomózy x 1 anastomóza

ELSEVIER

CrossMark

Surgery for Obesity and Related Diseases 11 (2015) 351–355

SURGERY FOR OBESITY AND RELATED DISEASES

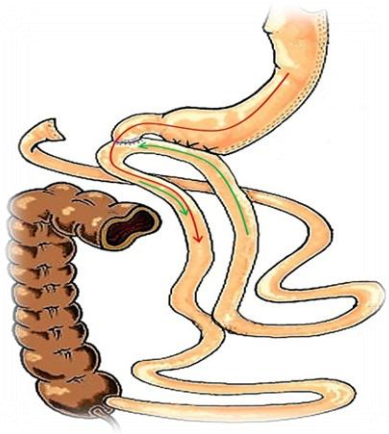
Original article

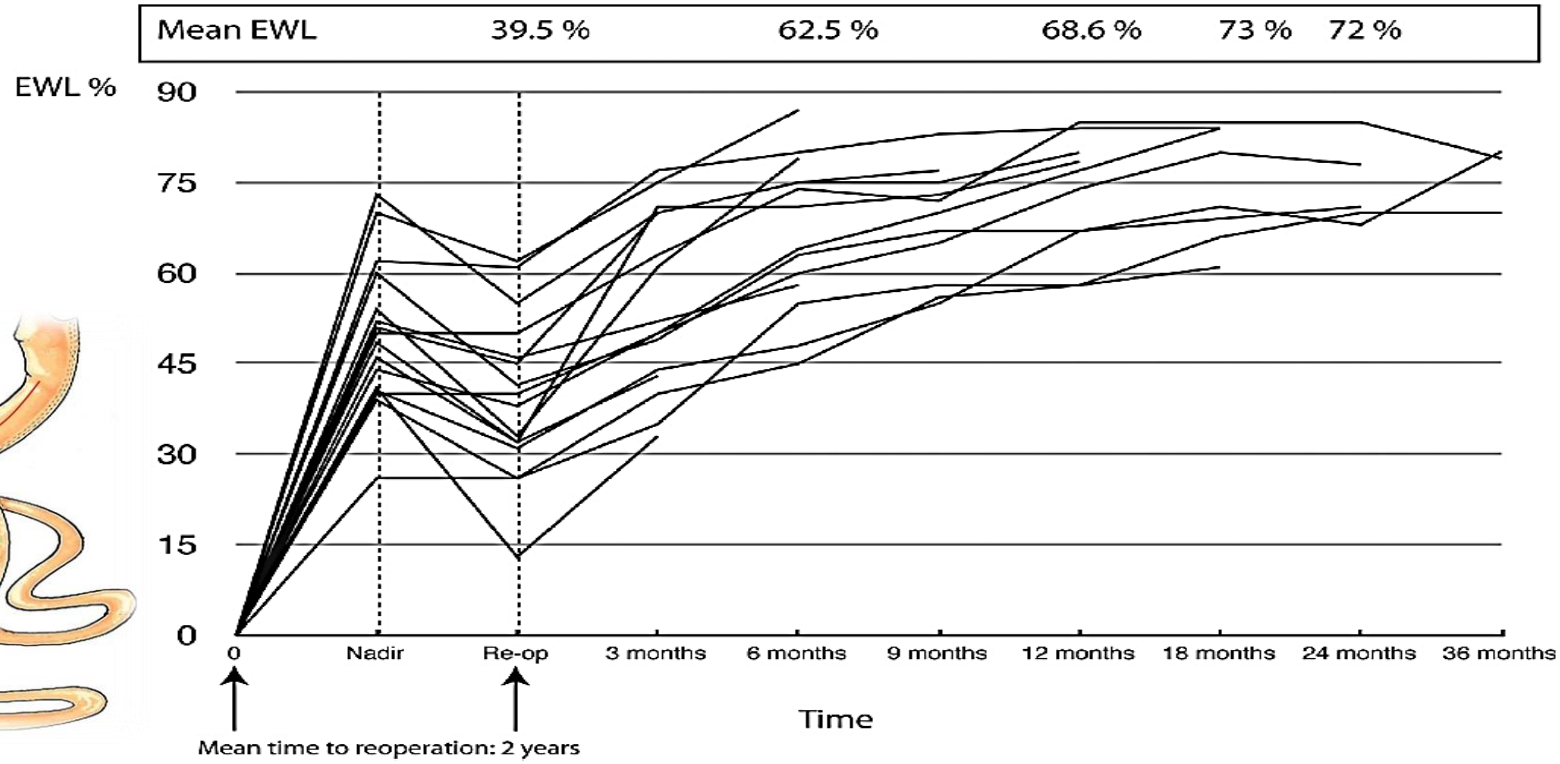
Single-anastomosis duodenoileal bypass as a second step after sleeve gastrectomy

Andrés Sánchez-Pernaute[a,*], Miguel Ángel Rubio[b], María Conde[a], Emmy Arrue[a], Elia Pérez-Aguirre[a], Antonio Torres[a]

[a]Department of Surgery, Hospital Clínico San Carlos, Madrid, Spain
[b]Department of Endocrinology, Hospital Clínico San Carlos, Madrid, Spain

One-loop Duodenal Switch after SG / Surgery for Obesity and Related Diseases 11 (2015) 351–355





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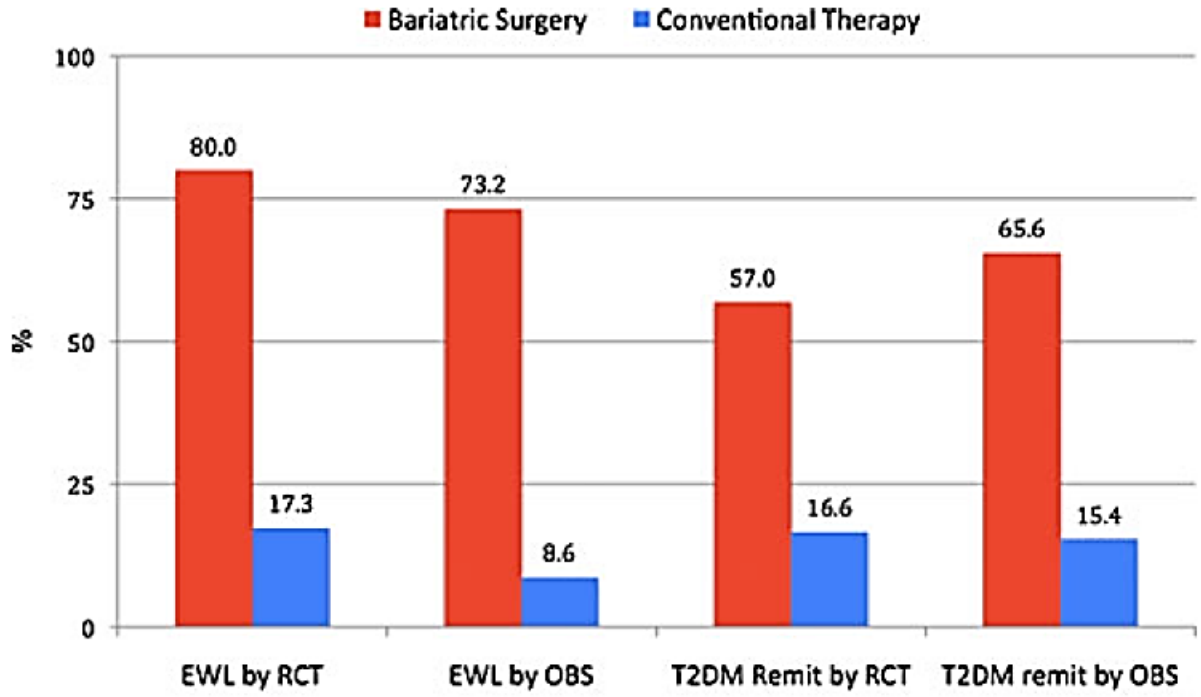
OBES SURG (2014) 24:437–455
DOI 10.1007/s11695-013-1160-3

REVIEW ARTICLE

Diabetes and Weight in Comparative Studies of Bariatric Surgery vs Conventional Medical Therapy: A Systematic Review and Meta-Analysis

G. Ribaric · J. N. Buchwald · T. W. McGlennon

Mean percent excess weight loss (%EWL) in bariatric surgery patients and conventional therapy patients by study design type
(randomized controlled trial vs observational)



Conventional, conventional treatment; Surgery, combined bariatric surgical procedures; EWL, excess weight loss; RCT, randomized controlled trial; OBS, observational study.

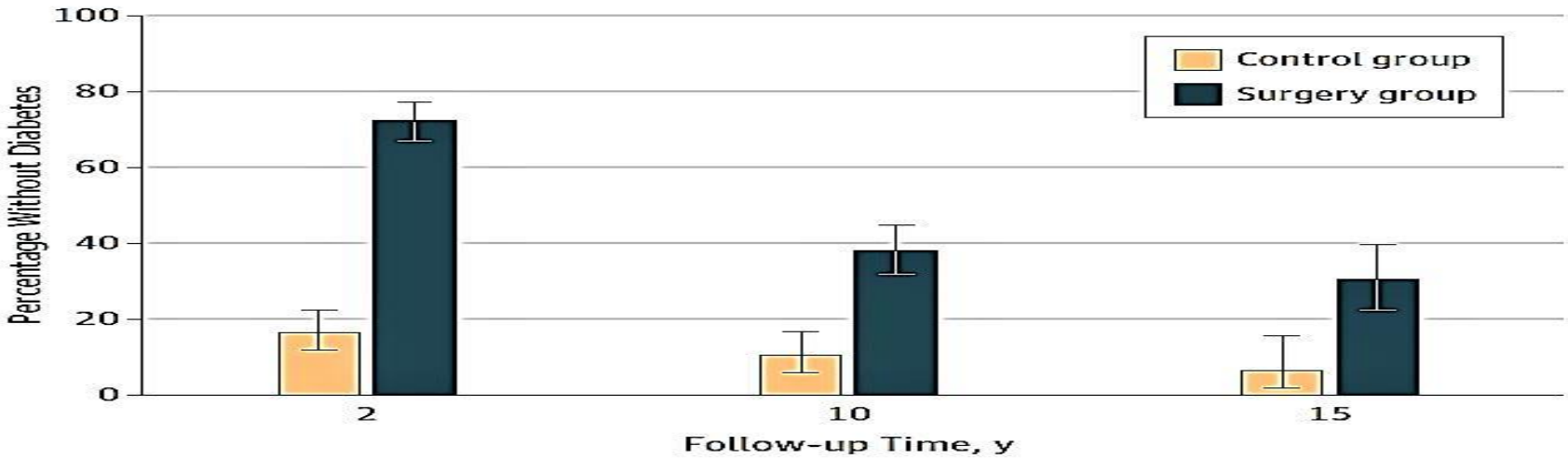
Original Investigation

JAMA June 11, 2014 Volume 311, Number 22

Association of Bariatric Surgery With Long-term Remission of Type 2 Diabetes and With Microvascular and Macrovascular Complications

Lars Sjöström, MD, PhD; Markku Peltonen, PhD; Peter Jacobson, MD, PhD; Sofie Ahlin, MD, PhD; Johanna Andersson-Assarsson, PhD; Åsa Anveden, MD;

Prevalence of Diabetes Remission in the Bariatric Surgery and Control Groups



Total participants			
Control	207	135	62
Surgery	303	236	115
Odds ratio (95% CI)	13.3 (8.5-20.7)	5.3 (2.9-9.8)	6.3 (2.1-18.9)

Diabetes remission was defined as fasting blood glucose levels lower than 110 mg/dL and no diabetes medication. Odds ratios (ORs) are unadjusted and calculated using logistic regression analysis. The control group was the reference group. $P < .001$ for the 2- and 10-year follow-up; $P = .001$ for the 15-year follow-up. Error bars indicate 95% CIs.

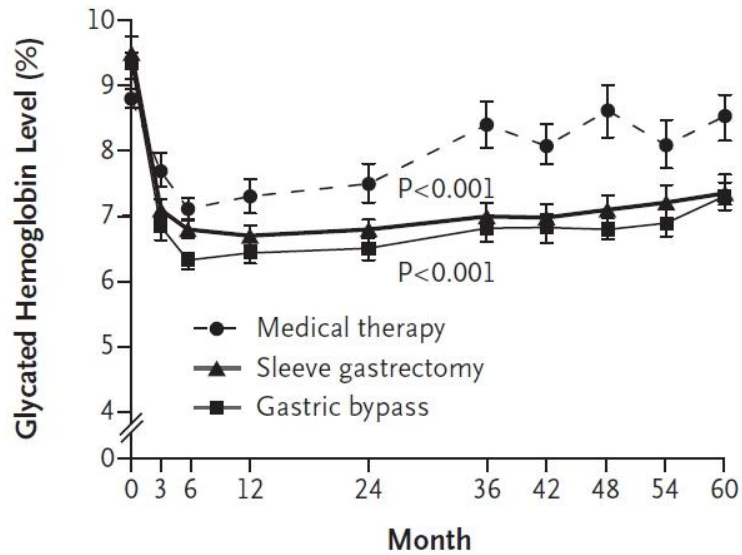
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Bariatric Surgery versus Intensive Medical Therapy for Diabetes — 5-Year Outcomes

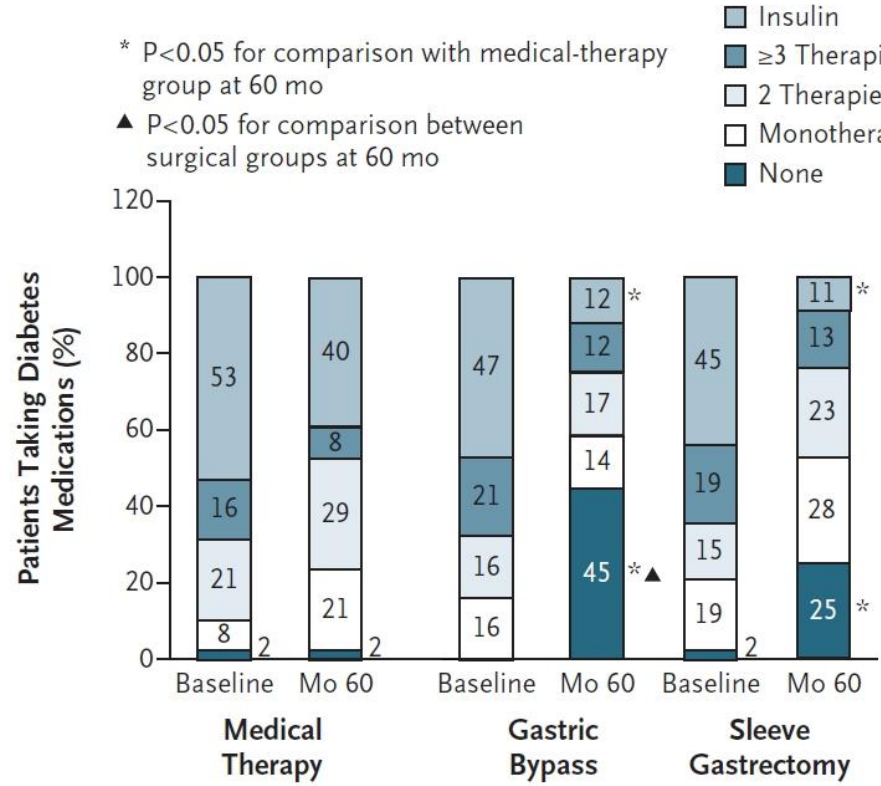
Philip R. Schauer, M.D., Deepak L. Bhatt, M.D., M.P.H., John P. Kirwan, Ph.D., Kathy Wolski, M.P.H., Ali Aminian, M.D., Stacy A. Brethauer, M.D., Sankar D. Navaneethan, M.D., M.P.H., Rishi P. Singh, M.D., Claire E. Pothier, M.P.H., Steven E. Nissen, M.D., and Sangeeta R. Kashyap, M.D., for the STAMPEDE Investigators*

A Glycated Hemoglobin



Mean (median) Value at Visit						
Medical therapy	8.8 (8.6)	7.3 (6.8)	7.5 (7.2)	8.4 (7.7)	8.6 (8.2)	8.5 (8.0)
Gastric bypass	9.3 (9.4)	6.4 (6.2)	6.5 (6.4)	6.8 (6.6)	6.8 (6.8)	7.3 (6.9)
Sleeve gastrectomy	9.5 (8.9)	6.7 (6.4)	6.8 (6.8)	7.0 (6.7)	7.1 (6.6)	7.4 (7.2)

B Diabetes Medications



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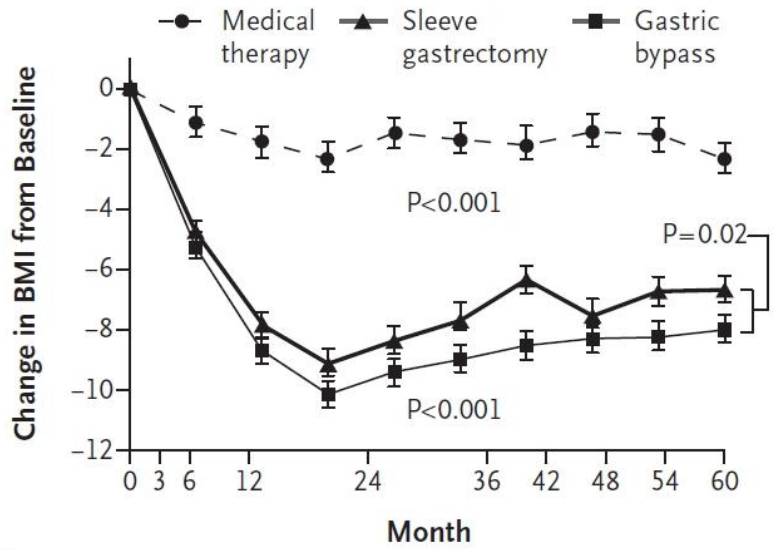
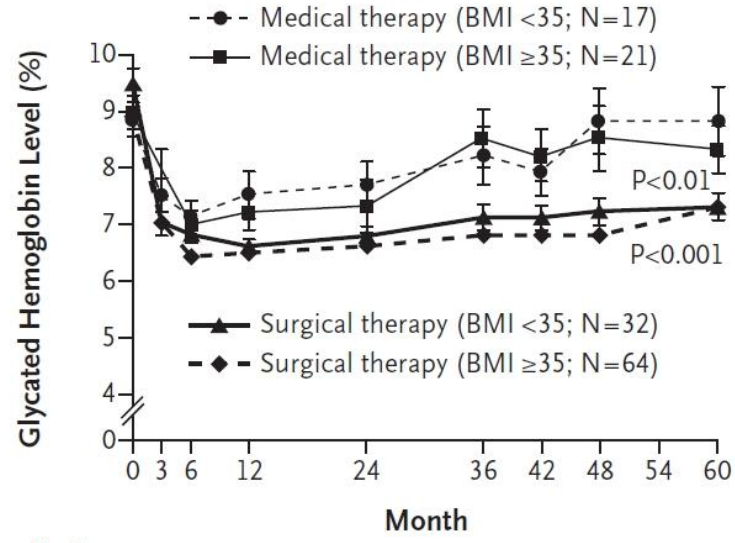
C Body-Mass Index



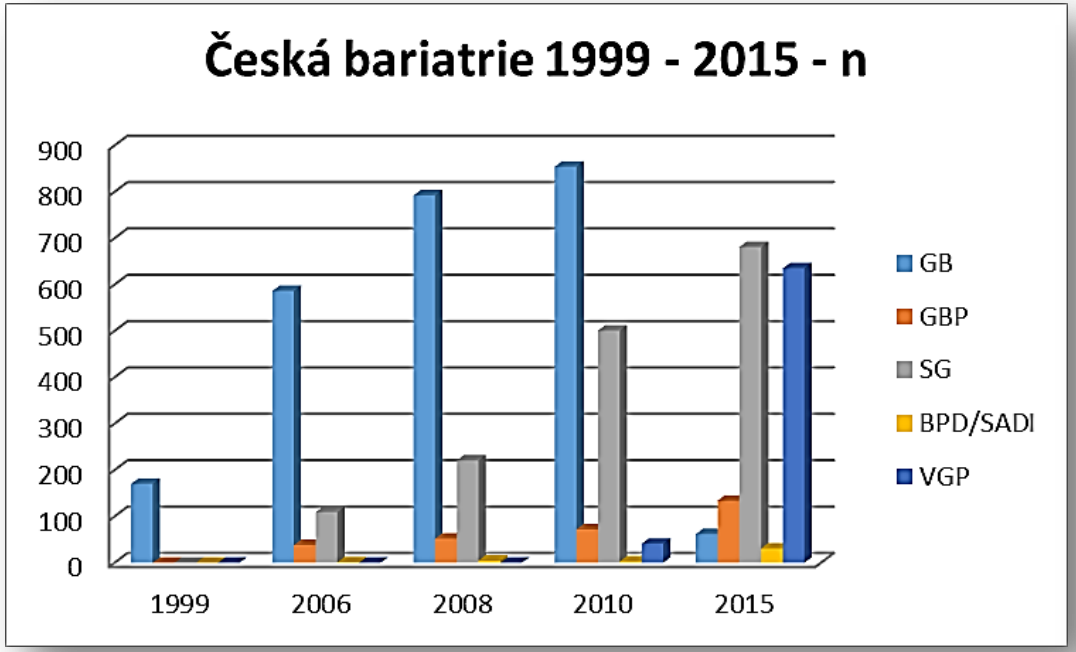
Mean Value at Visit						
Medical therapy	36.4	34.1	35.0	34.8	35.1	34.0
Gastric bypass	37.0	26.9	27.4	28.2	28.6	28.9
Sleeve gastrectomy	36.0	26.9	27.7	28.1	28.2	29.3

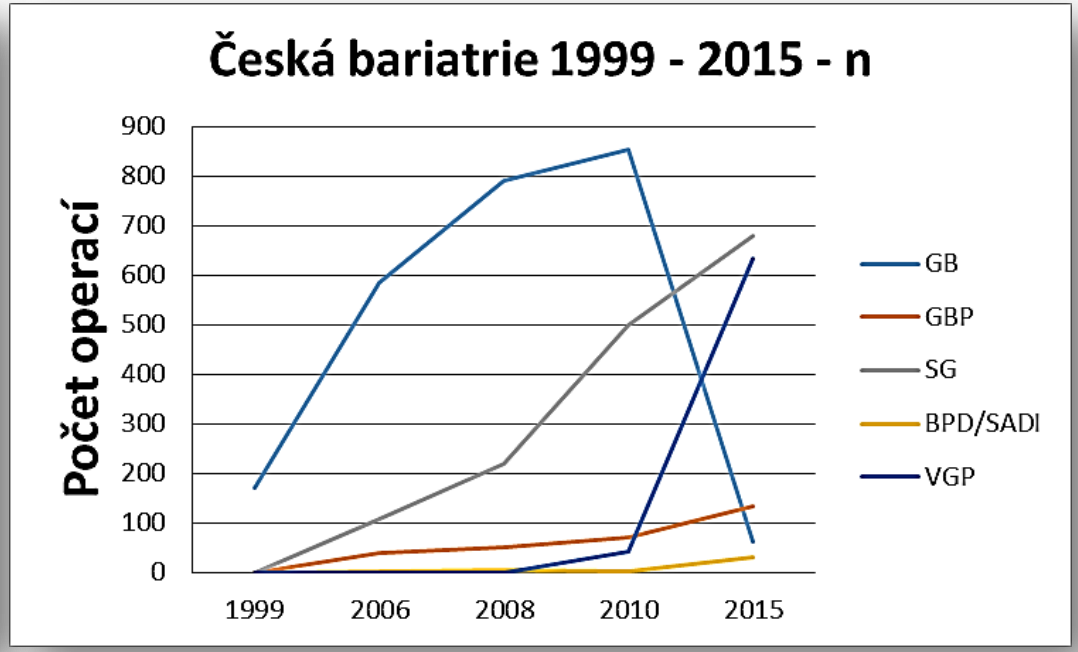
D Glycated Hemoglobin According to Body-Mass Index



Mean (median) Value at Visit						
Medical <35	8.8 (8.9)	7.5 (6.9)	7.7 (7.4)	8.2 (7.9)	8.8 (8.6)	8.8 (8.0)
Medical ≥35	8.9 (8.5)	7.2 (6.5)	7.3 (6.8)	8.5 (7.1)	8.5 (8.2)	8.3 (8.0)
Surgical <35	9.5 (9.1)	6.6 (6.7)	6.8 (6.8)	7.1 (6.7)	7.2 (6.8)	7.3 (7.1)
Surgical ≥35	9.4 (9.2)	6.5 (6.2)	6.6 (6.4)	6.8 (6.6)	6.8 (6.5)	7.3 (7.1)

	1999	2006	2008	2010	2015
GB	170	586	792	854	62
GBP	0	38	52	72	134
SG	0	109	221	501	681
BPD/SADI	0	1	5	3	31
VGP	0	0	0	41	635





2015 – 1543 operací

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143 kg
83 kg

Závěr

- Bariatricko-metabolická chirurgie je silným nástrojem pro:
  - výrazné dlouhodobé **snížení hmotnosti**
  - léčbu komorbidit **metabolického syndromu**
  - **léčbu DM2** u morbidně obézních nemocných od BMI ≥ 35! (30-35?)
    - DM2 bývá vyléčen u 82 % do ≤2 let a u 62 % do ≥ 2 po operaci![*)]

[*)] Buchwald H et al: Meta-analysis of Bariatric Surgery and Diabetes, Am J Med, 2009, 3, 248-256.

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„Děkuji za pozornost!“