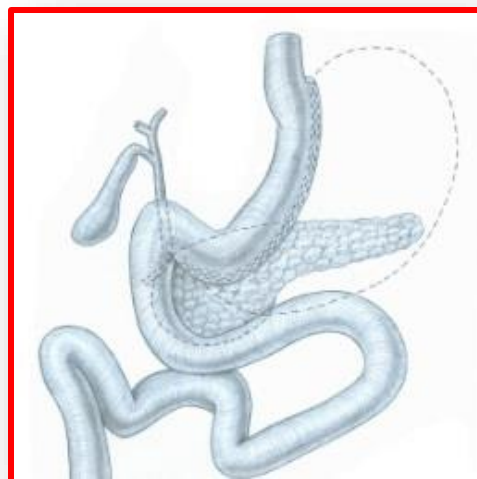


Sleeve Gastrectomy should **not** be performed in Patients with Reflux

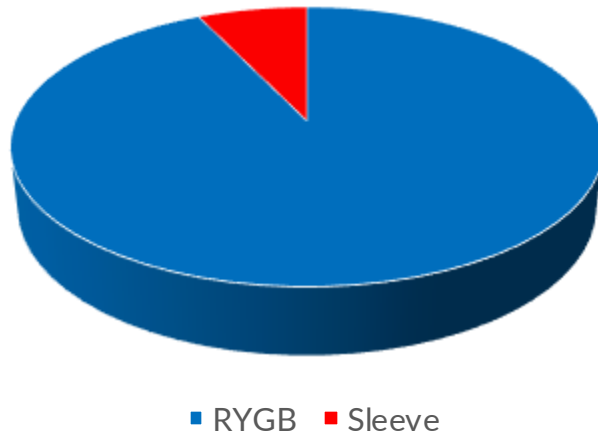


Prof. Ralph Peterli
Department of Clinical Research University of Basel, Switzerland
Senior Consultant Visceral Surgery: ViszeraMed Zürich & Spital Männedorf

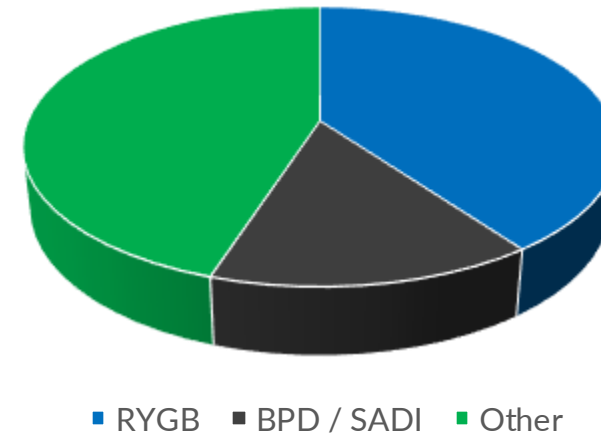
DISCLOSURES

- Research grants: Swiss National Science Foundation, Johnson & Johnson, Hirzbrunnen Foundation
NovoNordisk, UKBB, Novartis
- Lecture/consulting fees: Johnson & Johnson, Viatris, Falk Foundation, NovoNordisk, Lilly, Medtronic
- Case mix disclosure

Primary Procedures



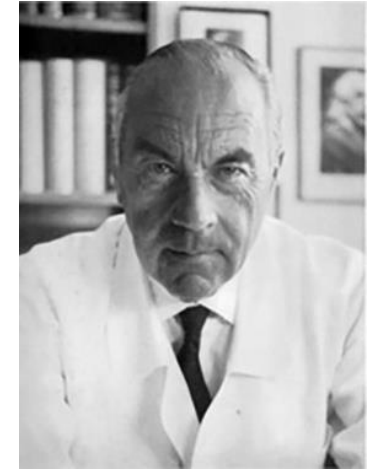
Revisional Procedures



DISCLOSURES



Basel



Prof. Rudolf Nissen



Prof. Mario Rossetti

1. Detection of GERD prior to MBS

“Basel Cohort”

- >3000 pts

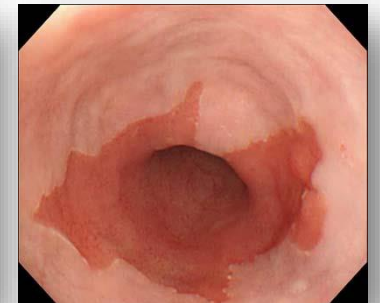
- Endoscopy:

- normal 38%
- Eosinophilic esophagitis 0.5%
- Candida, varices, diverticula 0.1% each
- Hiatal hernia 17%
- Barrett 1.8%
- Refluxoesophagitis 20%
- >LA grade B 5.2%
- Gastritis
- Type A 0.3%
- Type B
- Type C

EGD mandatory before MBS
Other investigations according to symptoms

22-29% GERD patients

Patients with high grade dysplasia
gastric carcinoma



1. Preoperative EGD

IFSO Position Paper 2025 on EGD

- N = 77 studies on Esophago-Duodeno-Gastroscopy (EGD)

- Results of pre-MBS EGD:

– Unexpected findings	61%
– No MBS	<1%
– Medical therapy	35%
– Changes of procedure type	23%
– In asymptomatic pts	36%

- Recommendation 1:

“As symptoms are not an accurate indicator of pre-MBS pathology.....EGD should be strongly considered prior to MBS”

Only 68% perform preoperative EGD routinely before MBS *



Obesity Surgery (2025) 35:4889–4916
<https://doi.org/10.1007/s11695-025-08206-8>



EDITORIAL

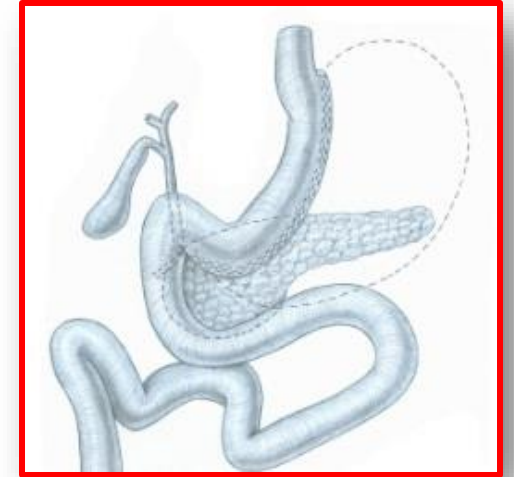
International Federation for Surgery for Obesity and Metabolic Disorders Position Statement on the Role of Endoscopy Before and After Bariatric Surgery

Wendy A. Brown^{1,2} · Jessica Au^{1,2} · Christine Stier⁵ · Rachel Moore⁶ · Chetan P. Amin^{10,11}



2. What Happens after LSG to Anti-reflux Barrier

- LSG worsens the anti-reflux barrier via multiple mechanisms:
 - Gastric compliance ↓ → intragastric pressure ↑
 - Lower esophageal sphincter (LES) pressure ↓
 - Mean decrease of 3.82 mmHg post-LSG, $p < 0.001$ *
 - Altered gastric emptying
 - DeMeester score ↑
 - Mean increase of 11.72, $p < 0.001$ *
 - Indicating objective worsening of acid exposure despite significant BMI reduction
 - Contributing anatomical factors include:
 - Sleeve shape
 - LES injury
 - Hiatal hernia



3. GERD & Barrett after LSG vs LRYGB

10y SLEEVEPASS

JAMA Surgery | Original Investigation

Effect of Laparoscopic Sleeve Gastrectomy vs Roux-en-Y Gastric Bypass on Weight Loss, Comorbidities, and Reflux at 10 Years in Adult Patients With Obesity The SLEEVEPASS Randomized Clinical Trial

Paulina Salminen, MD, PhD; Sofia Grönroos, MD; Mika Helmiö, MD, PhD; Saija Hurme, MSc; Anne Juuti, MD, PhD; Risto Juusela, MD; Pipsa Peromaa-Haavisto, MD, PhD; Marja Leivonen, MD, PhD; Pirjo Nuutila, MD, PhD; Jari Ovaska, MD, PhD

	No./total No. (%)		
	LSG (n = 91)	LRYGB (n = 85)	P value
All patients who underwent endoscopy	91/121 (75.2)	85/119 (71.4)	
PPI intake preoperatively	11/89 (12)	5/81 (6)	.20 ^a
PPI intake at 10 y	58/90 (64)	30/84 (36)	<.001 ^a
GERD symptoms			
No symptoms preoperatively or at any point	18/90 (20)	39/85 (46)	
Symptoms similar to preoperatively	16/90 (18)	6/85 (7)	
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All patients with esophagitis	28/91 (31)	6/85 (7)	<.001 ^d
Los Angeles classification			
Grades A	14/28 (50)	3/6 (50)	
Grades B	12/28 (43)	2/6 (33)	
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All patients with Barrett esophagus ^e	4/91 (4)	3/85 (4)	.29 ^a
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Basel cohort: 58% *

* Wölnerhanssen & Peterli, SOARD 2023; Salminen, JAMA Surg 2022

3. GERD & Barrett after LSG vs LRYGB

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JAMA Surgery | Original Investigation

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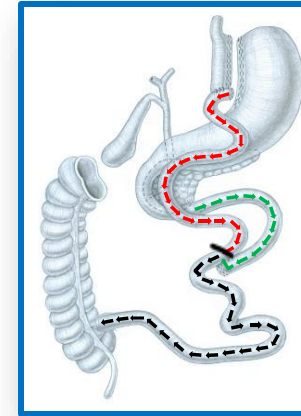
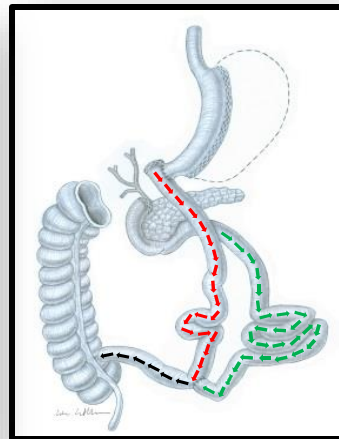
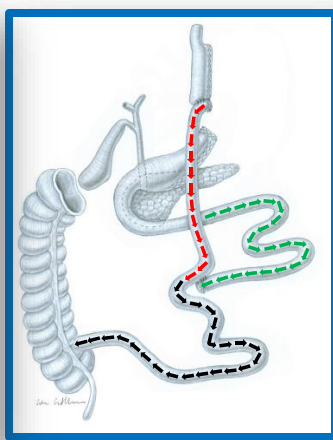
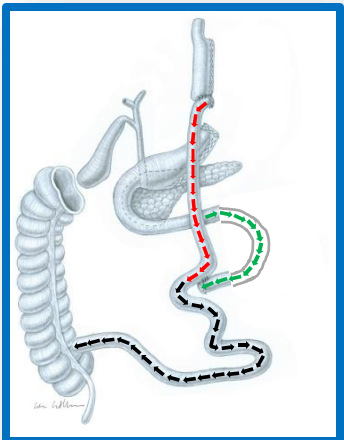
3. GERD & Barrett after LSG vs LRYGB

10y SM-BOSS

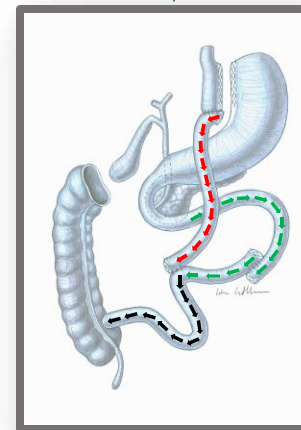
- LSG had significantly higher rates of conversion than LRYGB (30% vs. 5.5%, $p < 0.001$)



- n=32
- Indication:
 - Reflux 50%
 - Suboptimal weight loss 30%
 - Both 20%

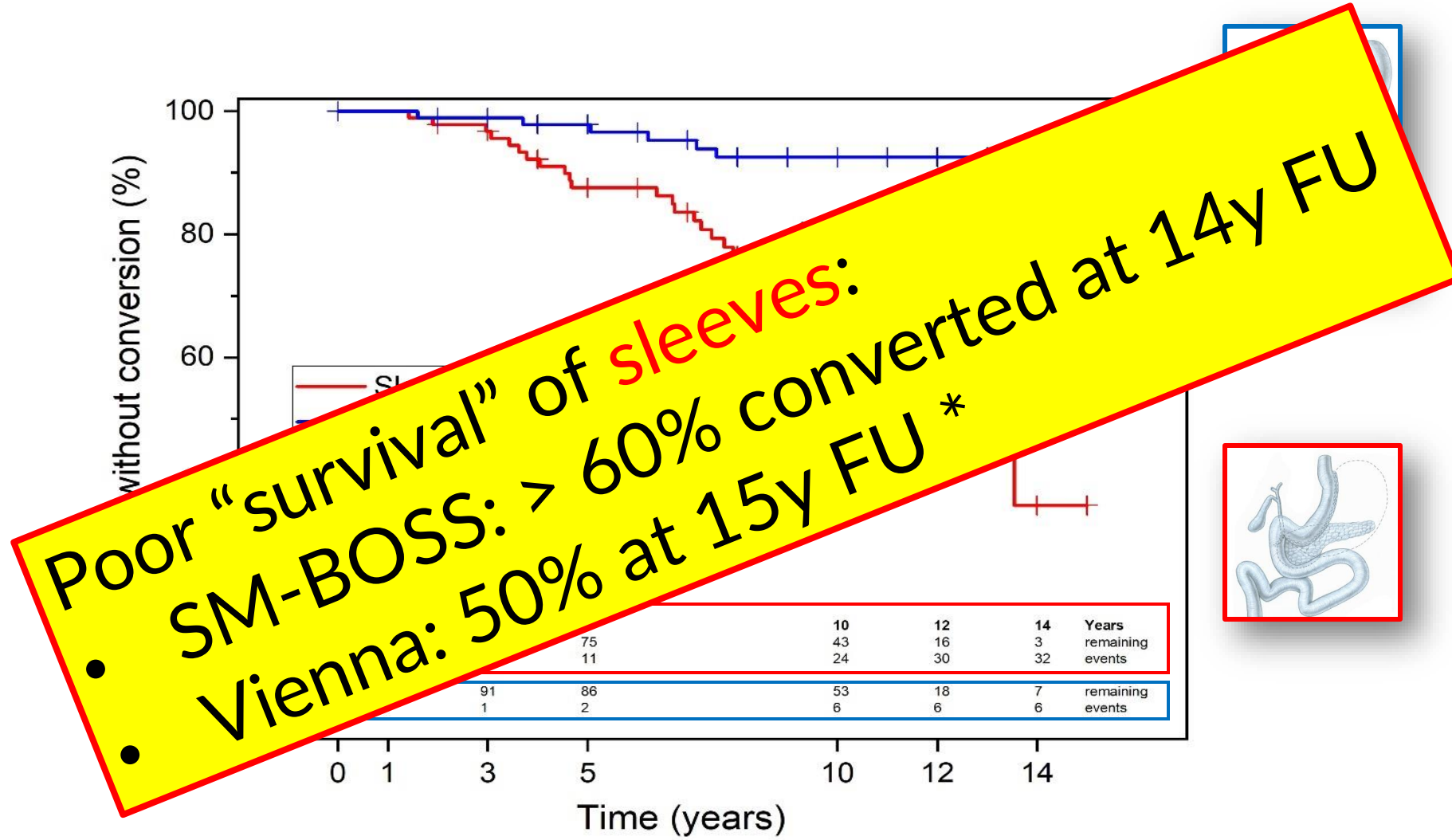


- n = 6
- Indication:
 - Suboptimal weight loss 100%



3. Probability of Conversions after LSG vs LRYGB

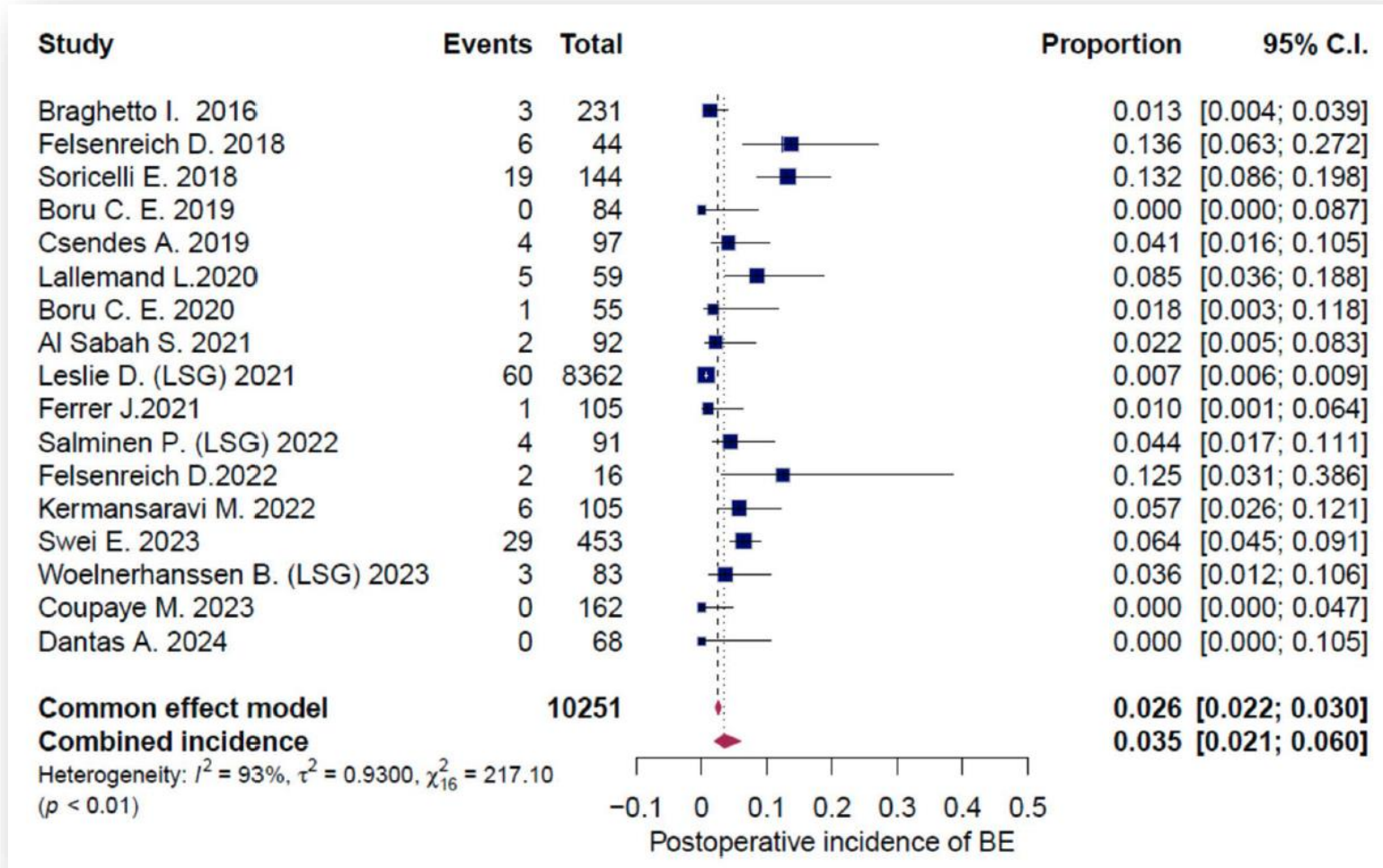
10y SM-BOSS



3. Barrett after LSG

IFSO position paper 2025 on EGD

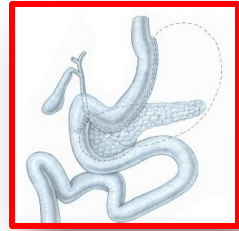
- Barrett's postop in studies with preop. endoscopy and FU min. 2y: LSG: 3.53%



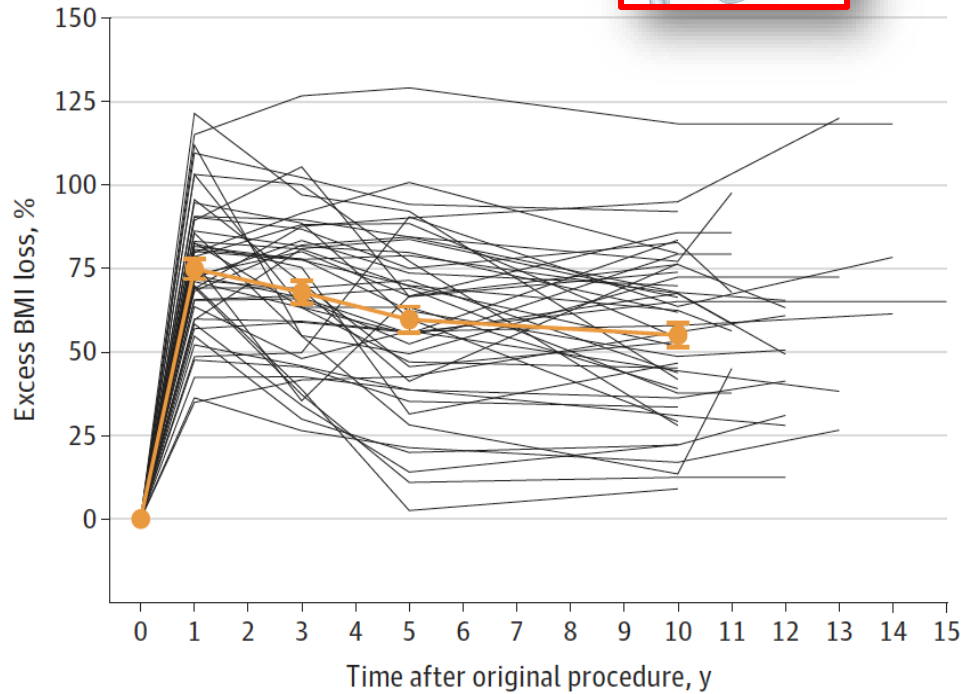
4. Weight loss after LSG vs LRYGB

10y SM-BOSS

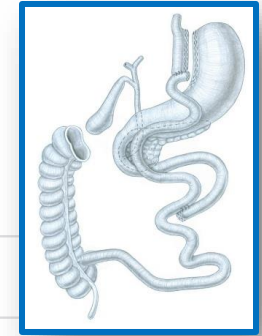
- Per protocol analysis



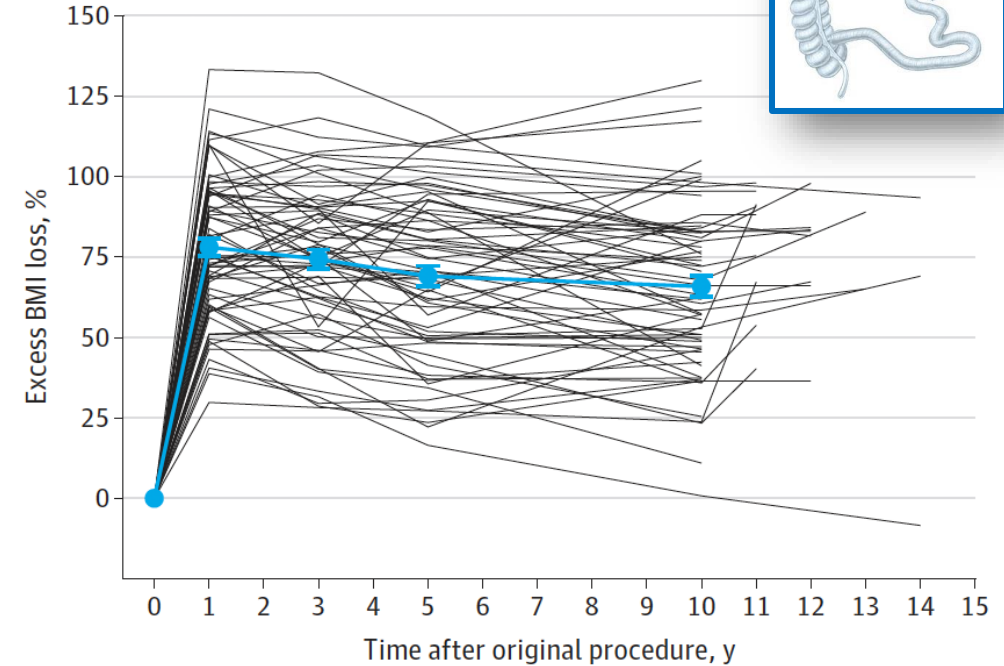
n = 48



Sleeve $56.1 \pm 25.2\%$



n = 66



Bypass $65.9 \pm 26.3\%$

p = 0.048

4. Weight loss

Comparison to other RCT's

5 & 10 y

Author	Journal	Year	N		FU years	FU-rate %	reported as	Mean weight loss		p
			Sleeve	Bypass				Sleeve	Bypass	
Schauer (Stampede)	NEJM	17	47	49	5	96	% EB MIL	61	68	0.02
Zang	Obes Surg	14	32	32	5	96	% EWL	63.2	76.2	0.02
Ignat	BJS	17	37	29	5	66	% EWL	65.1	74.8	0.02
Salminen (Sleevepass) *	JAMA	18	98	95	5	80	% EWL	49	57 *	n.s.
Peterli (SM-BOSS)	JAMA	18	101	104	5	95	% EB MIL	61.1	68.3	n.s.
Sleevepass/SM-BOSS	BJS	21	199	199	5	87	% EB MIL	56	63	0.001
Hauge (Oseberg)	Lancet DM	25	55	54	5	85	% WL	17.2	22.2	0.0002
Biter (SleeveBypass) #	Lancet RHE	25	312	316	5	77	% EB MIL	58.8	67.1 #	(n.s.)
Salminen (Sleevepass) *	JAMA Surg	22	98	95	10	85	% EWL	43.5	50.7 *	(n.s.)
Kraljevic & Peterli (SM-BOSS)	JAMA Surg	25	93	95	10	76	% EB MIL	56 pp	66 pp	0.04

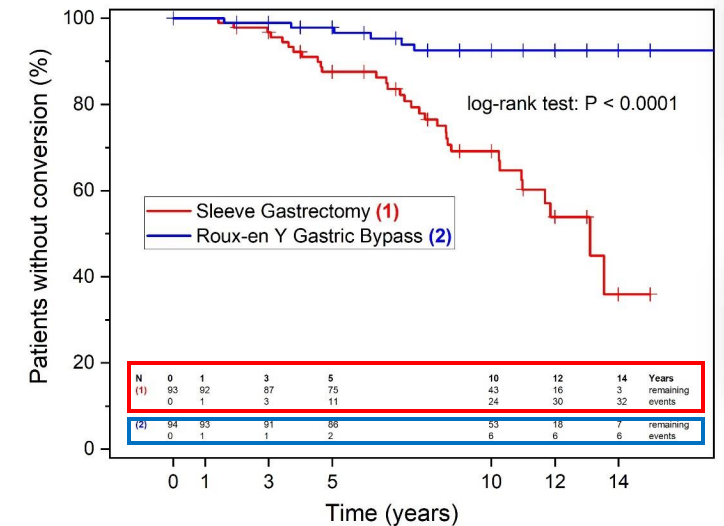
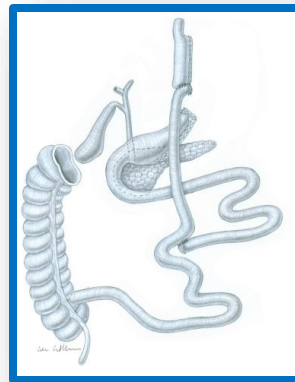
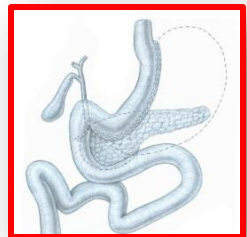
* Equivalence trial: margins -9 to +9% EWL

Equivalence trial: margins -13 to +13% EB MIL

SUMMARY

Sleeve Gastrectomy Should **Not** be Performed in Patients with Reflux

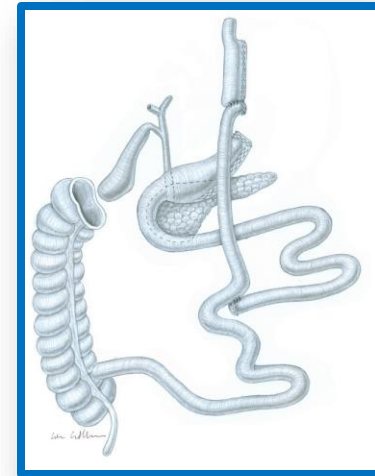
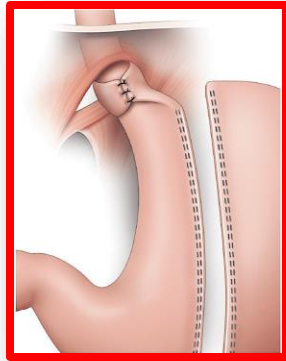
- Up to **36% of asymptomatic** pts are suffering from GERD prior to MBS
 - With pathologies such as:
 - Reflux-esophagitis
 - Hiatal hernia
 - Barret's
 - Malignancies
- Reflux barrier is severely altered after Sleeve
 - Can Nissen-Sleeve really prevent that?
- Pt with GERD prior to MBS will most likely suffer more after LSG
 - SM-BOSS:
 - 70% of the 32% conversions after 10y = GERD related in preselected pts *



CONCLUSION

*Sleeve Gastrectomy Should **Not** be Performed in Patients with Reflux*

- I recommend LSG only:
 - In pts with contra-indication for RYGB
 - Strong patient wish (after detailed information of pros & cons)
- If 50% of conversions due to suboptimal weight loss or recurrent weight gain





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