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REVISIONAL SURGERY AFTER ROUX-EN-Y GASTRIC BYPASS FOR WEIGHT REGAIN OR INADEQUATE WEIGHT LOSS – AN MBSAQIP ANALYSIS

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Conflicts of Interest

- **I have no potential conflicts of interest to declare**

Background

- Bariatric surgery is a safe and effective treatment option for obesity
- Incidence of revisional bariatric surgery is increasing
  - Insufficient weight loss or weight regain
  - Mechanical failure (e.g. band erosion or slippage)
  - Complications 2/2 to initial procedure (ex. Severe GERD after sleeve gastrectomy)
- Most common reason for RBS is insufficient weight loss or weight regain
  - ~10-20% patients following RYGB
- RBS is technically difficult; data regarding the optimal revisional technique is limited

- **Objectives: To compare 30-day post-operative outcomes between revisional surgeries for IWL or WR after RYGB**

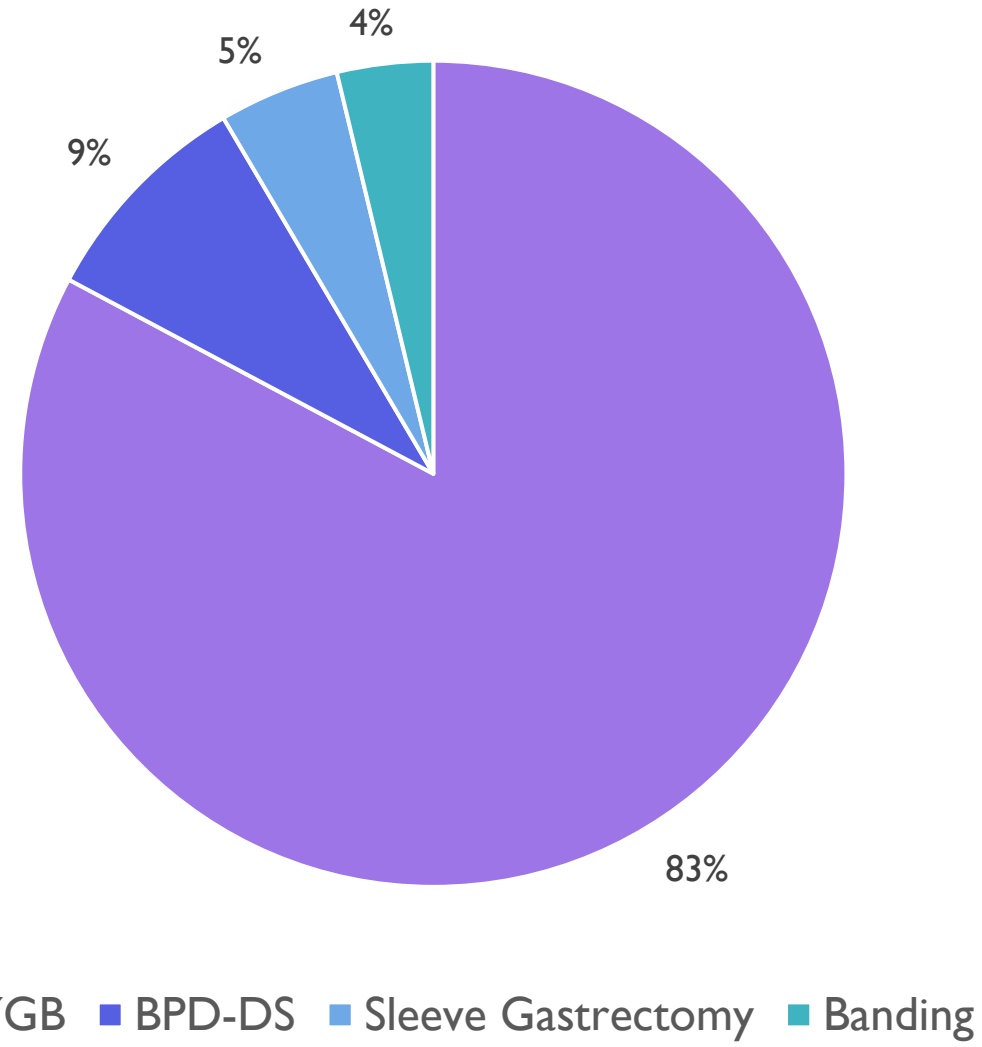
Methods

- The 2020 and 2021 Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) databases queried for patients who underwent surgical revision or conversion of RYGB for WR or IWL
- Revisional techniques included
  - RYGB revision
  - Adjustable gastric banding over RYGB (LGB)
  - Conversion to sleeve gastrectomy (SG)
  - Conversion to biliopancreatic diversion with or without duodenal switch (BPD).
- Univariate analysis and multivariate logistic regression were used to evaluate the association between revisional technique and post-operative outcomes.

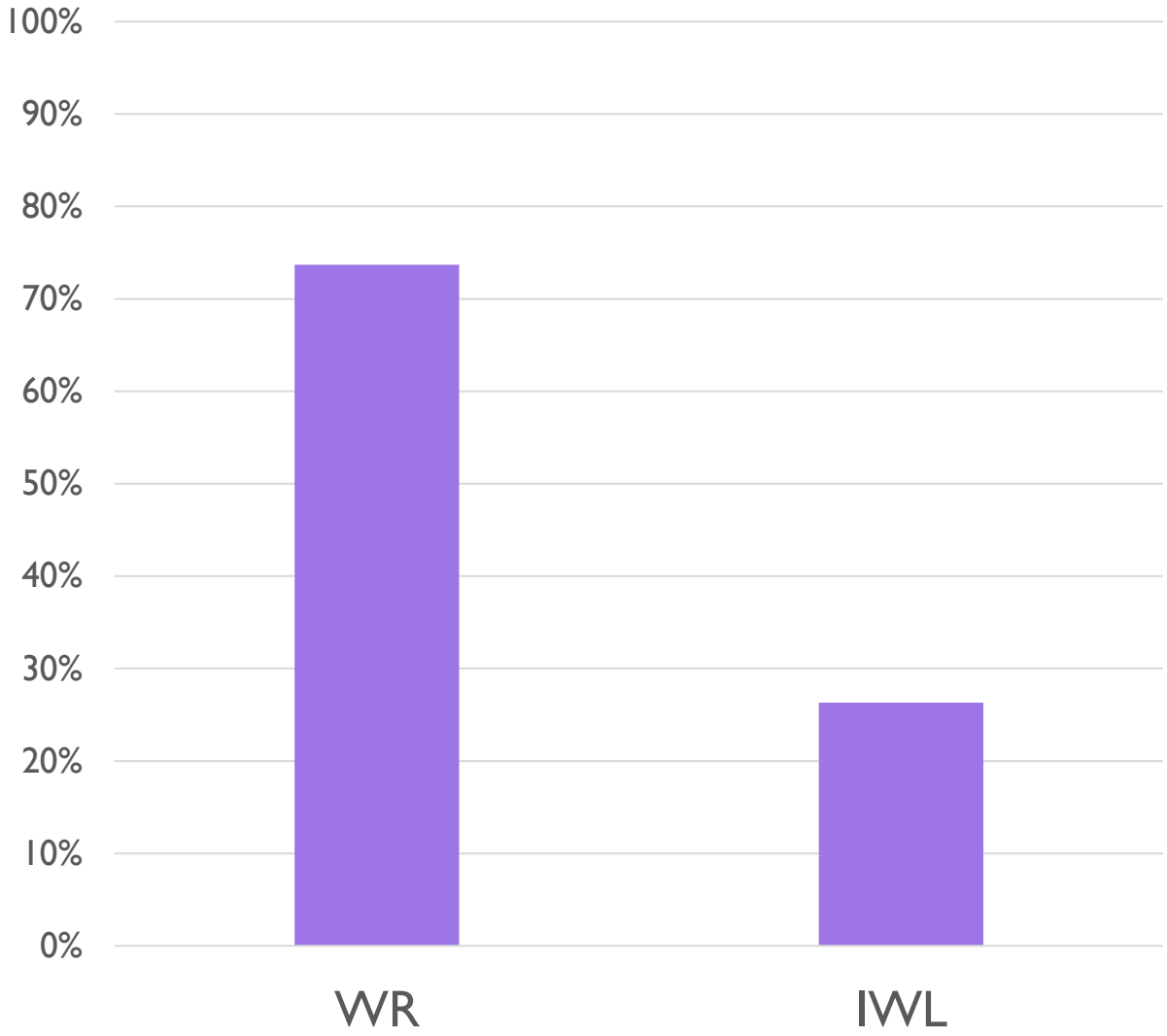
PATIENT DEMOGRAPHICS

		RYGB (n=2732)	BPD-DS (n=288)	Sleeve (n=156)	Banding (n=124)	p-value
Age (yrs), mean		49.6 (± 9.8)	48.6 (± 9.4)	47.8 (± 9.2)	49.3 (9.9)	0.061
Gender	Female	2432 (89.0%)	252 (87.5%)	136 (87.2%)	109 (87.9%)	0.771
	Male	300 (11.0%)	36 (12.5%)	20 (12.8%)	15 (12.1%)	
Race	White	1544 (56.5%)	159 (55.2%)	71 (45.5%)	69 (55.6%)	**<0.001**
	Black/AA	810 (29.6%)	108 (37.5%)	34 (21.8%)	38 (30.6%)	
Hispanic (Y)		436 (16.0%)	288 (8.7%)	28 (17.9%)	18 (14.5%)	**<0.001**
BMI, mean		43.1 (± 7.4)	48.0 (± 8.5)	45.3 (± 8.5)	43.4 (±7.2)	**<0.001**
Hx of PE		53 (1.9%)	14 (4.9%)	5 (3.2%)	3 (2.4%)	**0.014**
Hx of DVT		58 (2.1%)	12 (4.2%)	6 (3.8%)	0 (0.0%)	**0.024**
Sleep Apnea		582 (21.3%)	109 (37.8%)	37 (23.7%)	23 (18.5%)	**<0.001**
GERD		927 (33.9%)	75 (26.0%)	36 (23.1%)	33 (26.6%)	**<0.001**
HTN		1155 (42.3%)	140 (48.6%)	55 (35.3%)	57 (46.0%)	**0.039**
ASA Class	I	6 (0.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	**<0.001**
	II	571 (20.9%)	25 (8.7%)	36 (23.1%)	25 (20.2%)	
	III	2081 (76.2%)	223 (77.4%)	98 (62.8%)	95 (76.6%)	
	IV	73 (2.7%)	40 (13.9%)	22 (14.1%)	2 (1.6%)	

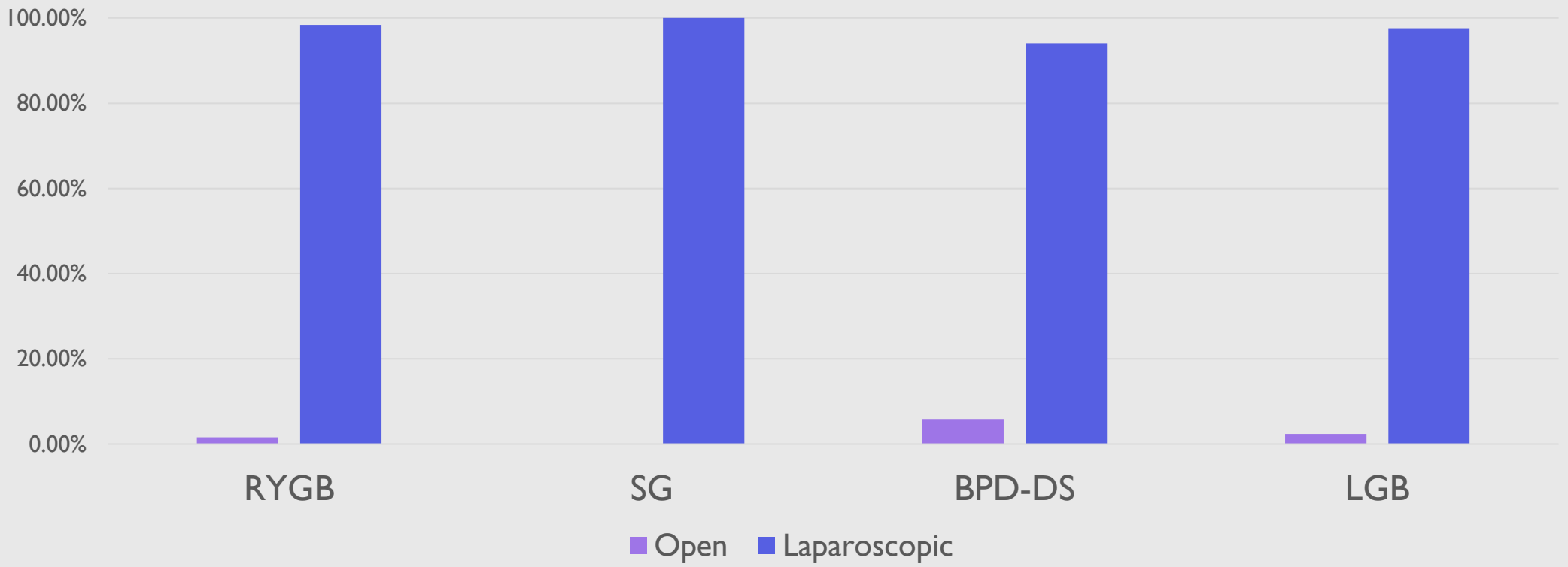
Results – Types of Revisions



Results – Indications for Revision



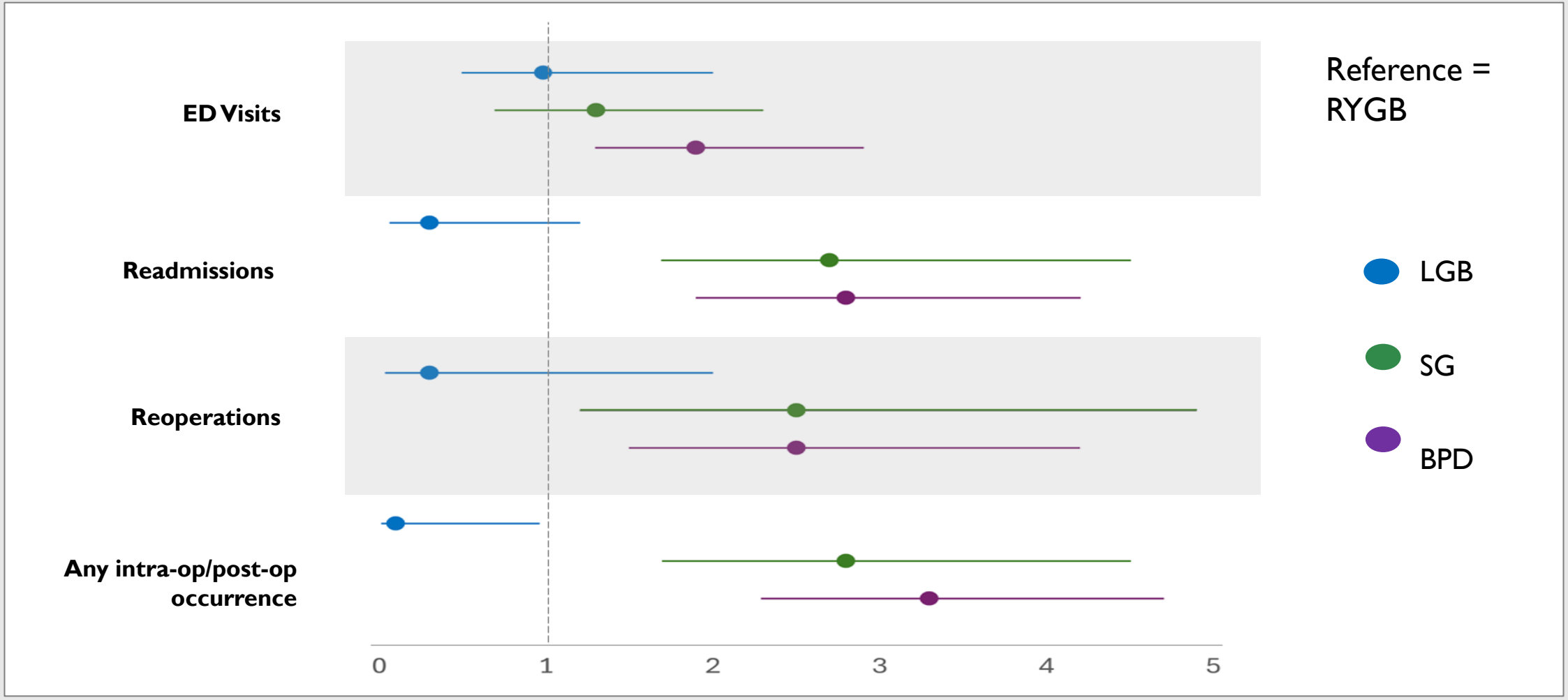
Results – Operative Approach



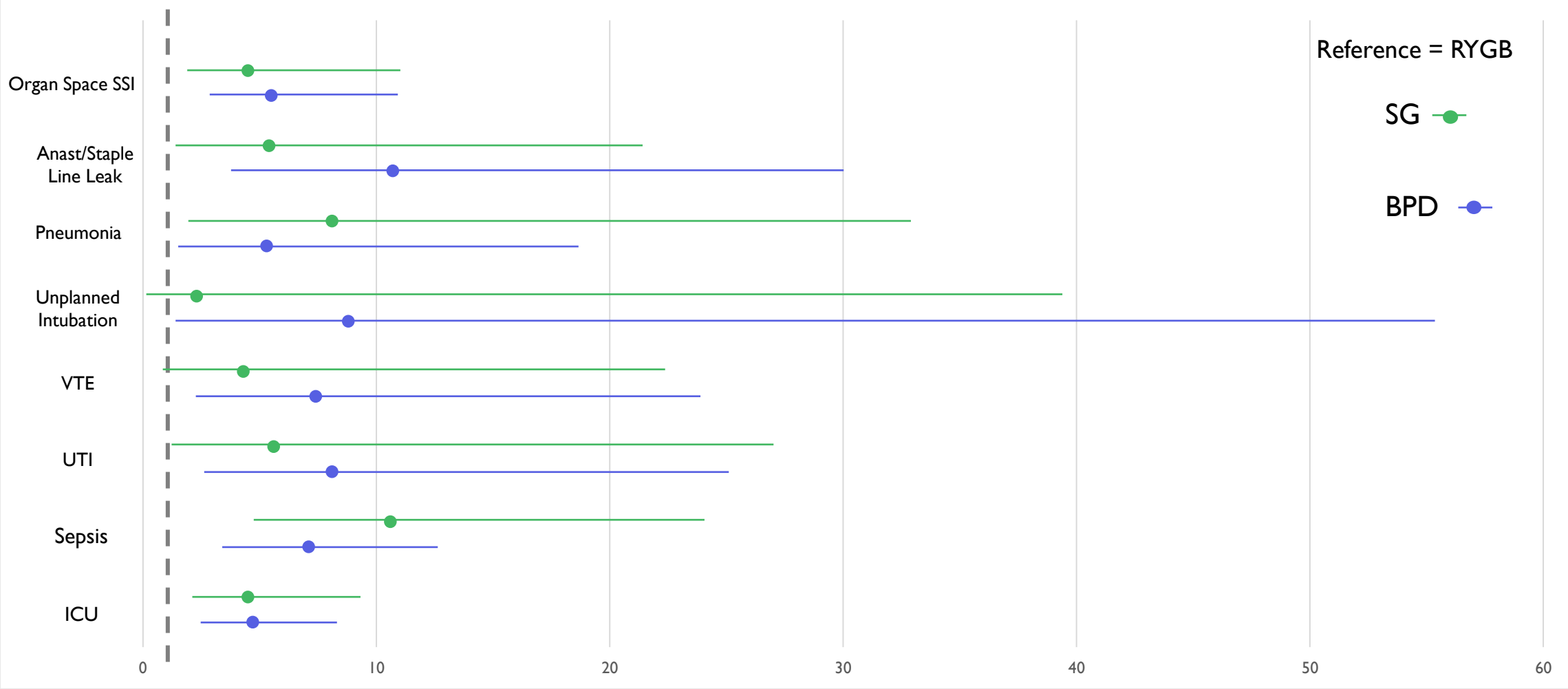
	RYGB (n=2732)	Sleeve (n=156)	BPD-DS (n=288)	Banding (n=124)	p-value
Any intra-op/post-op occurrence	159 (5.8%)	23 (14.7%)	53 (18.4%)	1 (0.8%)	<0.001
Organ/Space SSI	41 (1.5%)	10 (6.4%)	22 (7.6%)	0 (0.0%)	<0.001
Anast/Staple Line Leak	19 (0.7%)	10 (6.4%)	16 (5.6%)	0 (0.0%)	<0.001
PNA	9 (0.3%)	2 (1.3%)	6 (2.1%)	0 (0.0%)	<0.001
Unplanned Intubation	7 (0.3%)	2 (1.3%)	6 (2.1%)	0 (0.0%)	<0.001
PE	4 (0.1%)	1 (0.6%)	3 (1.0%)	1 (0.8%)	0.019
VTE	3 (0.1%)	1 (0.6%)	3 (1.0%)	0 (0.0%)	0.006
Post-op Ventilator >48 hrs	4 (0.1%)	1 (0.6%)	5 (1.7%)	0 (0.0%)	<0.001
ARF	0 (0.0%)	1 (0.6%)	6 (2.1%)	0 (0.0%)	<0.001
UTI	8 (0.3%)	3 (1.9%)	5 (1.7%)	0 (0.0%)	<0.001
Transfusion (72 h)	27 (1.0%)	3 (1.9%)	14 (4.9%)	0 (0.0%)	<0.001
Sepsis	8 (0.3%)	3 (1.9%)	9 (3.1%)	0 (0.0%)	<0.001
ICU	26 (1.0%)	7 (4.5%)	17 (5.9%)	0 (0.0%)	<0.001
Post-op GI tract bleeding	11 (0.4%)	1 (0.6%)	10 (3.5%)	0 (0.0%)	<0.001
Non-op interventions	46 (1.7%)	6 (3.8%)	33 (11.5%)	0 (0.0%)	<0.001
Reop	79 (2.9%)	10 (6.4%)	23 (8.0%)	1 (0.8%)	<0.001
Read	156 (5.7%)	22 (14.1%)	43 (14.9%)	2 (1.6%)	<0.001
ED visits	196 (7.2%)	13 (8.3%)	36 (12.5%)	8 (6.5%)	0.013
Non-home Discharge	1540 (56.4%)	156 (54.2%)	77 (49.4%)	43 (34.7%)	<0.001

POST-OPERATIVE OUTCOMES

Multivariate Analysis – Post-Operative Outcomes



Multivariate Analysis – Post-Operative Outcomes



Conclusions

- RYGB revision was the most commonly performed revisional technique.
- Patients who underwent BPD and SG were significantly more likely to experience 30-day complications, reoperation, and readmission.
- Compared to RYGB revision, LGB was associated with fewer adverse events, shorter operative time, and LOS and similar rates of reoperation, readmission, and ED visits.
- However, further research is needed regarding long-term outcomes following RBS to better understand the optimal revisional technique

QUESTIONS?