

Supplementary Table 1. Comparative Analysis of Baseline Characteristics in Endoscopic Sleeve Gastroplasty and Intra-gastric Balloon Studies

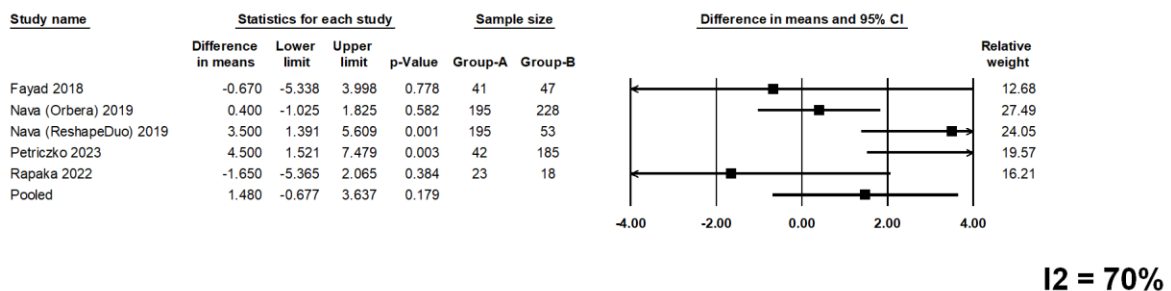
Author/Year	Study Type	Center Type	Country	Total Participants	ESG Participants	IGB Participants	F in ESG (%)	F in IGB (%)	Mean BMI ESG (kg/m ² ± SD)	Mean BMI IGB (kg/m ² ± SD)
Petriczko et al. (2023)	Retrospective	Multi	Poland	227	42	185	69.5% (29)	83.9% (155)	44.8	34.2
Rapaka et al. (2022)	Prospective	Single	Spain	41	23	18	87% (20)	100% (18)	41.21 ± 5.38	34.50 ± 4.46
Fayad et al. (2018)	Retrospective/Abstract	Single	USA	88	41	47	58% (24)	98% (46)	41.2	34.8
Nava et al. (2019)	Prospective	Single	Spain	-	-	-	-	-	-	-
- Orbera 12 months				301	150	151	70.40%	70.20%	38.3±5.7	37.6±6.7
- ReshapeDuo 12 months				216	150	66	70.40%	79.30%	38.3±5.7	38.4±5.2
- Orbera 6 months				423	195	228	70.40%	70.20%	38.3±5.7	37.6±6.7

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ReshapeDuo	6 months		248	195	53	70.40%	79.30%	38.3±5.7	38.4±5.2		

Table 2: Comparative Analysis of % TBWL with ESG minus that of IGB at 6 and 12 months post-procedure

Follow up periods	The difference in % TBWL with ESG minus that of IGB (95% confidence interval), I ² (heterogeneity %)	P value
6 Months	1.48 (95% CI 0.67-3.64), I ² = 70%	0.179
12 Months	3.85 % (95% CI 0.70-7.01), I ² = 77%	0.016

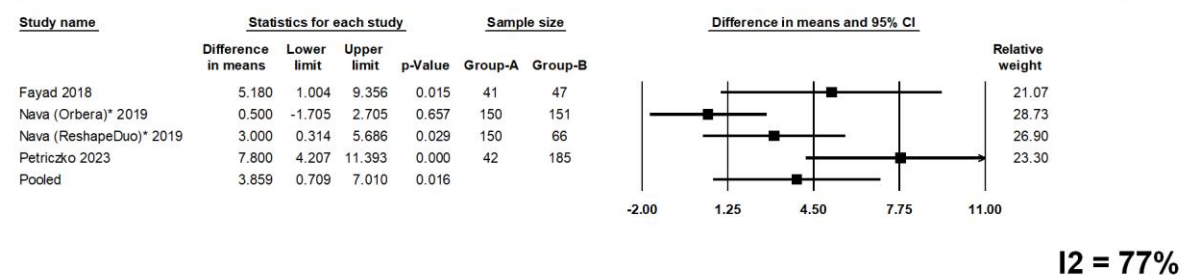
Difference in % weight loss between IGB and ESG at 6 months



Meta Analysis

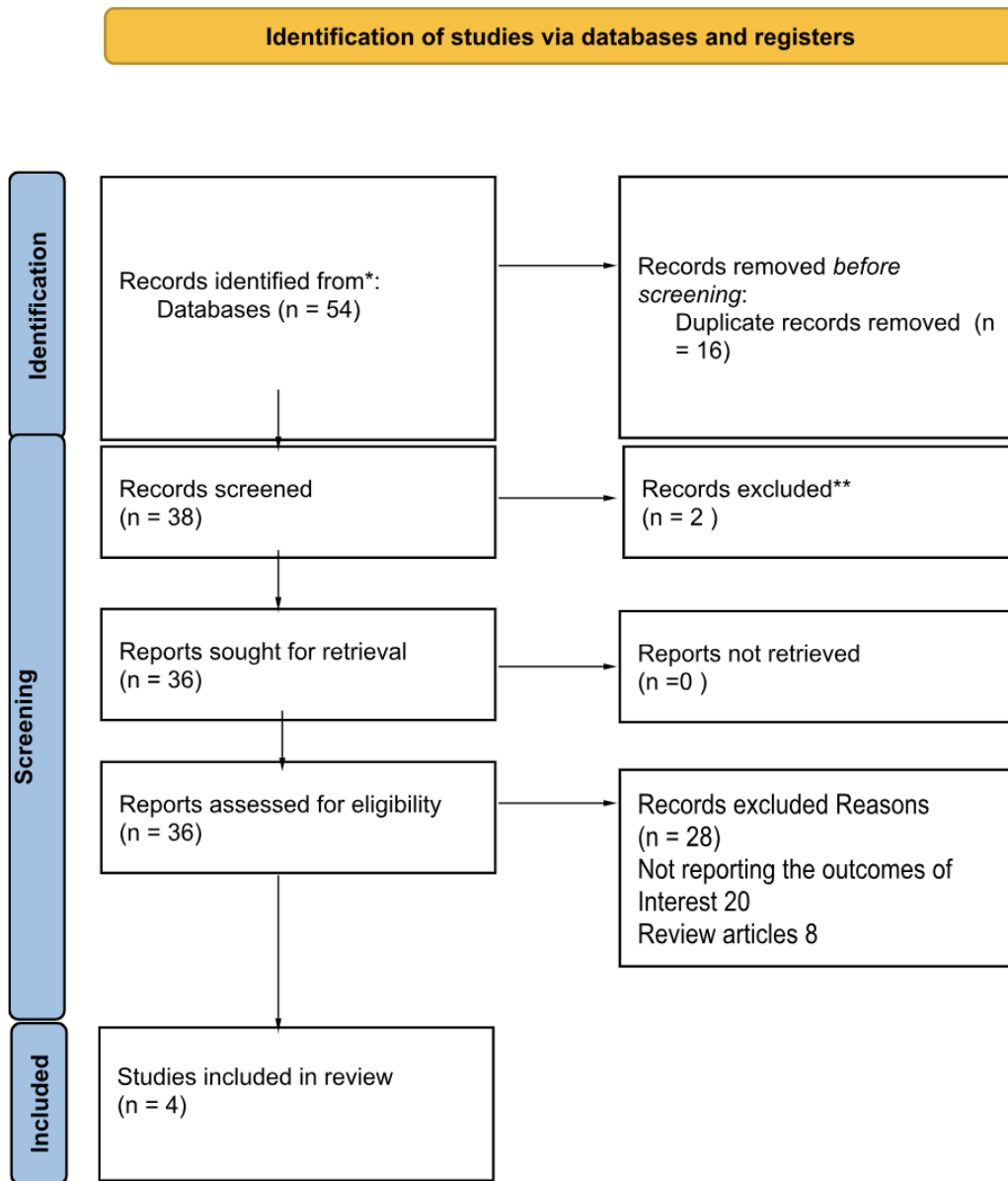
Supplementary Figure 1.

Difference in % weight loss between IGB and ESG at 12 months



Supplementary Figure 2.

Appendix 1. PRISMA checklist



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

Appendix 2. Search Strategy

PubMed: 14 results

Search number	Query	Sort By	Filters	Search Details	Results
8	#6 AND #7	Most Recent		((("endoscope s"[All Fields] OR "endoscoped"[All Fields] OR "endoscopes"[MeSH Terms] OR "endoscopes"[All Fields] OR "endoscope"[All Fields] OR "endoscopical"[All Fields] OR "endoscopically"[All Fields] OR "endoscopy"[MeSH Terms] OR "endoscopy"[All Fields] OR "endoscopic"[All Fields]) AND ("sleeve"[All Fields] OR "sleeved"[All Fields] OR "sleeves"[All Fields] OR "sleeving"[All Fields]) AND ("gastroplasty"[MeSH Terms] OR "gastroplasty"[All Fields] OR "gastroplasties"[All Fields]) AND (((("intrastral"[All Fields] OR "intrastrally"[All Fields] OR "intrastric"[All Fields] OR "intrastrical"[All Fields] OR "intrastrically"[All Fields]) AND ("balloon"[All Fields] OR "balloon s"[All Fields] OR "balloons"[All Fields])) OR "Gastric Balloon"[MeSH Terms]) AND ("weight loss"[MeSH Terms] OR ("weight"[All Fields] AND "loss"[All Fields]) OR "weight loss"[All Fields] OR ("obesity, morbid"[MeSH Terms] OR ("obesity"[All Fields] AND "morbid"[All Fields]) OR "morbid obesity"[All Fields] OR ("morbid"[All Fields] AND "obesity"[All Fields]))) NOT ("case reports"[Publication Type] OR "systematic review"[Publication Type] OR "meta analysis"[Publication Type] OR "review"[Publication Type])) AND "english"[Language]	14
7	"english"[Language]	Most Recent		"english"[Language]	31,797,573

6	#5 NOT #4	Most Recent	("endoscope s"[All Fields] OR "endoscoped"[All Fields] OR "endoscopes"[MeSH Terms] OR "endoscopes"[All Fields] OR "endoscope"[All Fields] OR "endoscopical"[All Fields] OR "endoscopically"[All Fields] OR "endoscopy"[MeSH Terms] OR "endoscopy"[All Fields] OR "endoscopic"[All Fields]) AND ("sleeve"[All Fields] OR "sleeved"[All Fields] OR "sleeves"[All Fields] OR "sleeving"[All Fields]) AND ("gastroplasty"[MeSH Terms] OR "gastroplasty"[All Fields] OR "gastroplasties"[All Fields]) AND (((("intrastral"[All Fields] OR "intrastrally"[All Fields] OR "intrastric"[All Fields] OR "intrastrically"[All Fields]) AND ("balloon"[All Fields] OR "balloon s"[All Fields] OR "balloons"[All Fields])) OR "Gastric Balloon"[MeSH Terms]) AND ("weight loss"[MeSH Terms] OR ("weight"[All Fields] AND "loss"[All Fields]) OR "weight loss"[All Fields] OR ("obesity, morbid"[MeSH Terms] OR ("obesity"[All Fields] AND "morbid"[All Fields]) OR "morbid obesity"[All Fields] OR ("morbid"[All Fields] AND "obesity"[All Fields]))) NOT ("case reports"[Publication Type] OR "systematic review"[Publication Type] OR "meta analysis"[Publication Type] OR "review"[Publication Type])	16
5	#1 AND #2 AND #3	Most Recent	("endoscope s"[All Fields] OR "endoscoped"[All Fields] OR "endoscopes"[MeSH Terms] OR "endoscopes"[All Fields] OR "endoscope"[All Fields] OR "endoscopical"[All Fields] OR "endoscopically"[All Fields] OR "endoscopy"[MeSH Terms] OR "endoscopy"[All Fields] OR "endoscopic"[All Fields]) AND ("sleeve"[All Fields] OR "sleeved"[All Fields] OR "sleeves"[All Fields] OR "sleeving"[All Fields]) AND ("gastroplasty"[MeSH Terms] OR "gastroplasty"[All Fields] OR "gastroplasties"[All Fields]) AND (((("intrastral"[All Fields] OR "intrastrally"[All Fields] OR "intrastric"[All Fields] OR "intrastrically"[All Fields]) AND ("balloon"[All Fields] OR "balloon s"[All Fields] OR "balloons"[All Fields])) OR "Gastric Balloon"[MeSH Terms]) AND ("weight loss"[MeSH Terms] OR ("weight"[All Fields] AND "loss"[All Fields]) OR "weight loss"[All Fields] OR ("obesity, morbid"[MeSH Terms] OR ("obesity"[All Fields] AND "morbid"[All Fields]) OR "morbid obesity"[All Fields] OR ("morbid"[All Fields] AND "obesity"[All Fields])))	55

4	"case reports"[Publication Type] OR "systematic review"[Publication Type] OR "meta analysis"[Publication Type] OR "review"[Publication Type]	Most Recent	"case reports"[Publication Type] OR "systematic review"[Publication Type] OR "meta analysis"[Publication Type] OR "review"[Publication Type]	5,666,653
3	Weight loss OR morbid obesity	Most Recent	"weight loss"[MeSH Terms] OR ("weight"[All Fields] AND "loss"[All Fields]) OR "weight loss"[All Fields] OR ("obesity, morbid"[MeSH Terms] OR ("obesity"[All Fields] AND "morbid"[All Fields]) OR "morbid obesity"[All Fields] OR ("morbid"[All Fields] AND "obesity"[All Fields]))	197,264
2	Intra gastric Balloon OR "Gastric Balloon"[mesh]	Most Recent	("intra gastral"[All Fields] OR "intra gastrally"[All Fields] OR "intra gastric"[All Fields] OR "intra gastrically"[All Fields] OR "intra gastrically"[All Fields] AND ("balloon"[All Fields] OR "balloon s"[All Fields] OR "balloons"[All Fields])) OR "Gastric Balloon"[MeSH Terms]	1,228
1	Endoscopic Sleeve Gastroplasty	Most Recent	("endoscope s"[All Fields] OR "endoscoped"[All Fields] OR "endoscopes"[MeSH Terms] OR "endoscopes"[All Fields] OR "endoscope"[All Fields] OR "endoscopical"[All Fields] OR "endoscopically"[All Fields] OR "endoscopy"[MeSH Terms] OR "endoscopy"[All Fields] OR "endoscopic"[All Fields]) AND ("sleeve"[All Fields] OR "sleeved"[All Fields] OR "sleeves"[All Fields] OR "sleeving"[All Fields]) AND ("gastroplasty"[MeSH Terms] OR "gastroplasty"[All Fields] OR "gastroplasties"[All Fields])	744

CINAHL: 5 results

#	Query	Limiters/Expanders	Last Run Via	Results
S 9	S6 NOT S7	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	5
		Narrow by Language: - english	Search Screen - Advanced Search	
		Search modes - Boolean/Phrase	Database - CINAHL Ultimate	
S 8	S6 NOT S7	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	6
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 7	PT ("Meta Analysis" OR "Systematic Review" OR "Book" OR "Proceedings" OR "Commentary" OR "Review" OR "Editorial") OR TI ("Meta Analysis"	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	1,301,503

	OR "Systematic Review")			
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 6	S3 AND S4 AND S5	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	13
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 5	S1 OR S2	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	512
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 4	(Weight loss OR morbid obesity) OR (MH "Obesity, Morbid") OR (MH "Weight Loss+")	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	98,999
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 3	Intragastric Balloon OR (MH "Balloon Dilatation+")	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	17,431
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 2	(MH "Gastroplasty") AND ((MH "Endoscopes+") OR (MH "Endoscopy+"))	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	469
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	
S 1	Endoscopic Sleeve Gastroplasty	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	154
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - CINAHL Ultimate	

Cochrane: 1 results

#	Query	Limiters/Expanders	Last Run Via	Results
S 9	S6 NOT S7	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	1
		Narrow by Language: - english	Search Screen - Advanced Search	
		Search modes - Boolean/Phrase	Database - Cochrane Central Register of Controlled Trials	
S 8	S6 NOT S7	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	1
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 7	TP ("Meta Analysis" OR "Systematic Review" OR "Book" OR	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	252,697

	"Proceedings" OR "Conference Abstract" OR "Commentary" OR "Review" OR "Editorial") OR TI ("Meta Analysis" OR "Systematic Review")			
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 6	S3 AND S4 AND S5	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	3
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 5	S1 OR S2	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	45
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 4	(Weight loss OR morbid obesity) OR (MH "Obesity, Morbid") OR (MH "Weight Loss+")	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	27,704
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 3	Intragastric Balloon OR (MH "Balloon Dilatation+")	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	152
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 2	(MH "Gastroplasty") AND ((MH "Endoscopes+) OR (MH "Endoscopy+")))	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	287
		Search modes - Boolean/Phrase	Search Screen - Advanced Search	
			Database - Cochrane Central Register of Controlled Trials	
S 1	Endoscopic Sleeve	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases	45

	Gastroplasty		
		Search modes - Boolean/Phrase	Search Screen - Advanced Search
			Database - Cochrane Central Register of Controlled Trials

Ovid: 34 results

Ovid MEDLINE(R) ALL <1946 to December 26, 2023>		
1	Endoscopic Sleeve Gastroplasty.ab,kf,ti.	281
2	Gastroplasty/ and (exp Endoscopy/ or exp Endoscopes/)	2451
3	1 or 2	2611
4	Intragastric Balloon.ab,kf,ti. or Gastric Balloon/	1038
5	(Weight loss or morbid obesity).ab,kf,ti. or obesity, morbid/ or exp weight loss/	148829
6	Meta-Analysis/ or Systematic Review/ or "Systematic Review".ti,ab. or Review/ or Editorial/ or Comment/	4938727
7	3 and 4 and 5	73
8	7 not 6	38
9	limit 8 to english language	34