SUBOPTIMAL RESPONSE TO MBS OR RECURRENT WEIGHT GAIN NEW ASMBS/IFSO GUIDELINES

Systematic Review for the new ASMBS/IFSO Guidelines

Antonio Vitiello M.D.; PhD

Researcher – University of Naples Federico II

Bariatric Surgeon – General Oncologic and Mini- Invasive Surgery Dept
University Hospital "Federico II" – Naples (Italy)

UNIVERSITÀ DEGLI STUDI DI NAPOLI
FEDERICO II

NIH National Institutes of Health
Turning Discovery Into Health

In a 1985 Consensus implications of obesity were established :

- increased risk for cardiovascular disease (especially hypertension), dyslipidemia, diabetes mellitus,

- Increased prevalances and mortality ratios of selected types of cancer

- socioeconomic and psychosocial impairment

A BMI of 40 kg/m² can be categorized as having "clinically severe obesity" , a term that is preferred to "morbid obesity"

A 1987 NIH consensus conference on surgery for obesity considered primarily intestinal (jejunoileal) bypass

The conference highlighted the undesirable side effects of this operation, and itsuse has all but disappeared

National Institutes of Health Consensus Development Conference
Draft Statement on

Gastrointestinal Surgery for Severe Obesity

25–27 March 1991

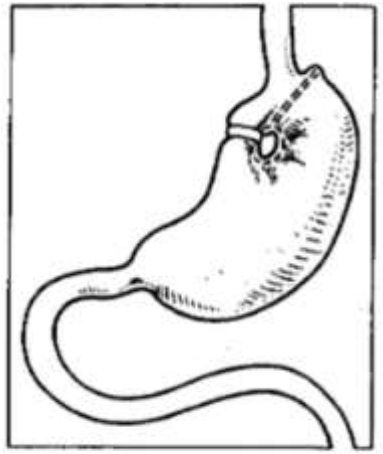


FIG. 1. Vertical banded gastroplasty

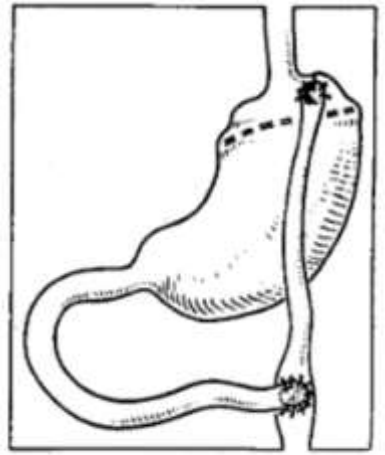
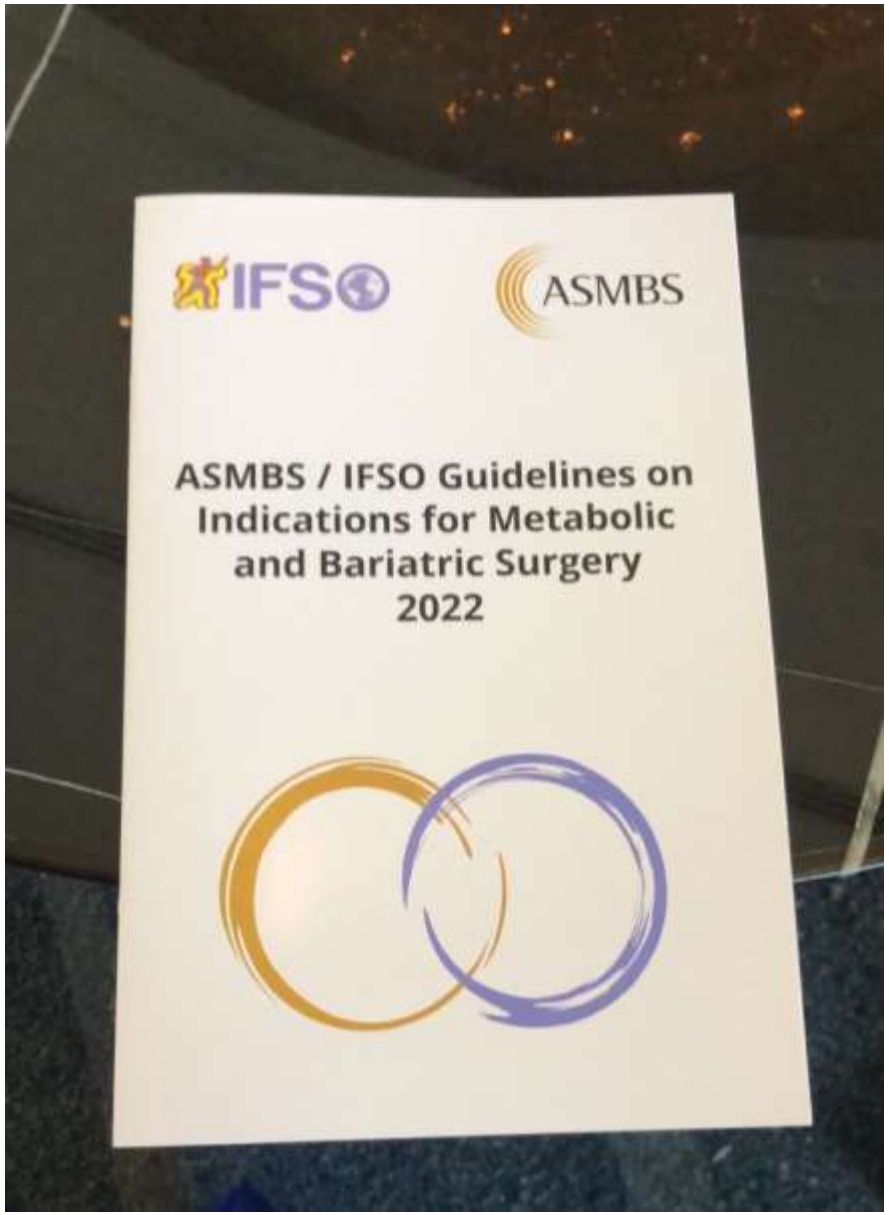


FIG. 2. Roux-en-Y gastric bypass

Following 2 days of presentations by experts and discussion by the audience, aconsensus panel weighed the evidence and prepared their consensus statement:

- Patients seeking therapy for severe obesity for the first time should be considered for treatment in a nonsurgical program
- Patients whose BMI exceeds 40 are potential candidates for surgery
- In certain instances, less severely obese patients (with BMI's between 35 and 40) also may be considered for surgery
- Patients should be selected carefully after evaluation by a multidisciplinary team
- Lifelong medical surveillance


IFSO
ASMBS
ASMBS / IFSO Guidelines on Indications for Metabolic and Bariatric Surgery 2022


IFSO 2022
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ORIGINAL CONTRIBUTIONS

2022 American Society of Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) Indications for Metabolic and Bariatric Surgery

Dan Eisenberg[1] · Scott A. Shikora[2] · Edo Aarts[3] · Ali Aminian[4] · Luigi Angrisani[5] · Ricardo V. Cohen[6] · Maurizio de Luca[7] · Silvia L. Faria[8] · Kasey P.S. Goodpaster[4] · Ashraf Haddad[9] · Jacques M. Himpens[10] · Lilian Kow[11] · Marina Kurian[12] · Ken Loi[13] · Kamal Mahawar[14] · Abdelrahman Nimeri[15] · Mary O'Kane[16] · Pavlos K. Papasavas[17] · Jaime Ponce[18] · Janey S. A. Pratt[1,19] · Ann M. Rogers[20] · Kimberley E. Steele[21] · Michel Suter[22,23] · Shanu N. Kothari[24]

ELSEVIER

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SURGERY FOR OBESITY AND RELATED DISEASES

Original article

2022 American Society for Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO): Indications for Metabolic and Bariatric Surgery

Dan Eisenberg, M.D.[a,*], Scott A. Shikora, M.D.[b], Edo Aarts, M.D., Ph.D.[c], Ali Aminian, M.D.[d], Luigi Angrisani, M.D.[e], Ricardo V. Cohen, M.D., Ph.D.[f], Maurizio De Luca, M.D.[g], Silvia L. Faria, Ph.D.[h], Kasey P. S. Goodpaster, Ph.D.[d], Ashraf Haddad, M.D.[i], Jacques M. Himpens, M.D., Ph.D.[j], Lilian Kow, B.M.B.S., Ph.D.[k], Marina Kurian, M.D.[l], Ken Loi, M.B.B.S., B.Sc. (Med)[m], Kamal Mahawar, M.B.B.S., M.Sc.[n], Abdelrahman Nimeri, M.D., M.B.B.Ch.[o], Mary O'Kane, M.Sc., R.D.[p], Pavlos K. Papasavas, M.D.[q], Jaime Ponce, M.D.[r], Janey S. A. Pratt, M.D.[a,s], Ann M. Rogers, M.D.[t], Kimberley E. Steele, M.D., Ph.D.[u], Michel Suter, M.D.[v,w], Shanu N. Kothari, M.D.[x]

Major updates to 1991 National Institutes of Health guidelines for bariatric surgery

- Metabolic and bariatric surgery (MBS) is recommended for individuals with a body mass index (BMI) $\geq$35 kg/m^2, regardless of presence, absence, or severity of co-morbidities.
- MBS should be considered for individuals with metabolic disease and BMI of 30-34.9 kg/m^2.
- BMI thresholds should be adjusted in the Asian population such that a BMI $\geq$25 kg/m^2 suggests clinical obesity, and individuals with BMI $\geq$27.5 kg/m^2 should be offered MBS.
- Long-term results of MBS consistently demonstrate safety and efficacy.
- Appropriately selected children and adolescents should be considered for MBS.

(Surg Obes Relat Dis 2022;18:1345–1356.)

Keywords: Obesity; Metabolic and bariatric surgery; IFSO; ASMBS; Criteria; Indications

guideline | AMERICAN DICTIONARY

guideline

noun [C]

US /ˈgaɪd.laɪn/

Cambridge Dictionary
Make your words meaningful

a piece of information that suggests how something should be done:

- *The article gives guidelines on how to invest your money safely.*

consensus

noun

/kənˈsensəs/

Cambridge Dictionary
Make your words meaningful

Add to word list

the feeling of most people

consenso

- *The consensus of opinion is that we should go ahead with the operation.*

*(Translation of **consensus** from the PASSWORD English-Italian Dictionary © 2014 K Dictionaries Ltd)*

ANALYSIS

RATING QUALITY OF EVIDENCE AND STRENGTH OF RECOMMENDATIONS

GRADE: an emerging consensus on rating quality of evidence and strength of recommendations

Guidelines are inconsistent in how they rate the quality of evidence and the strength of recommendations. This article explores the advantages of the GRADE system, which is increasingly being adopted by organisations worldwide

Box 1 | Advantages of GRADE over other systems

- Developed by a widely representative group of international guideline developers
- Clear separation between quality of evidence and strength of recommendations

Box 2 Quality of evidence and definitions

High quality— Further research is very unlikely to change our confidence in the estimate of effect

Moderate quality— Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate

Low quality— Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate

Very low quality— Any estimate of effect is very uncertain

Strong recommendation The panel is confident that the desirable effects of adherence to the recommendation outweigh the undesirable effects.

Weak recommendation: The desirable effects to adherence to the recommendation probably outweigh the undesirable effects, but the panel is less confident.

GoodFellows

IFSO

Table 1 Selected examples of definitions and prevalence of WR and IWL after BS

Characteristic	Unit/component/s	Examples
Definition		
WR	Using EWL%	>25% EWL from nadir [17–19]
	Using nadir weight %	≥10% [8, 20] or >15% of nadir weight [8, 9, 21, 22]
	Using nadir weight kg	≥10 kg from nadir [8, 21–23]
	Using maximum WL	≥10% [8, 24], ≥20 [8, 25] or ≥25 [8, 26] of maximum WL
	Using pre-surgery weight	≥10% WR of pre-surgery weight [8, 27]
	Using any WR after remission	Any WR after T2DM remission [28]
	Using any WR	Any WR [29]
	Using BMI	≥5 BMI kg/m^2 points from nadir [30]
		Increase in BMI >35 kg/m^2 after successful WL [31]
IWL	Using EWL%	EWL of <50% at 18 months [16]
Prevalence[a]		
WR		Post-LAGB (38%) [32]; post-LSG (27.8%) [33]; post-RYGB (3.9%) [34]
IWL		After LSG (32–40%) [17, 35]; after RYGB, OAGB, and LSG combined (20%) [36]

Range of definitions and prevalence selected are examples for illustration purposes only and do not include all examples in the literature. *EWL* excess weight loss, *WR* weight regain, *IWL* insufficient weight loss, *WL* weight loss, *T2DM* type 2 diabetes, *BMI* body mass index, *LAGB* laparoscopic adjustable gastric banding, *LSG* laparoscopic sleeve gastrectomy, *OAGB* one anastomosis gastric bypass

[a] Prevalence of WR are different depending on choice of BS procedure, varied assessment methods (EWL, weight from Nadir), and various follow-up periods


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IFSO

REVIEW

Weight Regain and Insufficient Weight Loss After Bariatric Surgery: Definitions, Prevalence, Mechanisms, Predictors, Prevention and Management Strategies, and Knowledge Gaps—a Scoping Review

Walid El Ansari[1,2,3] · Wahiba Elhag[4]

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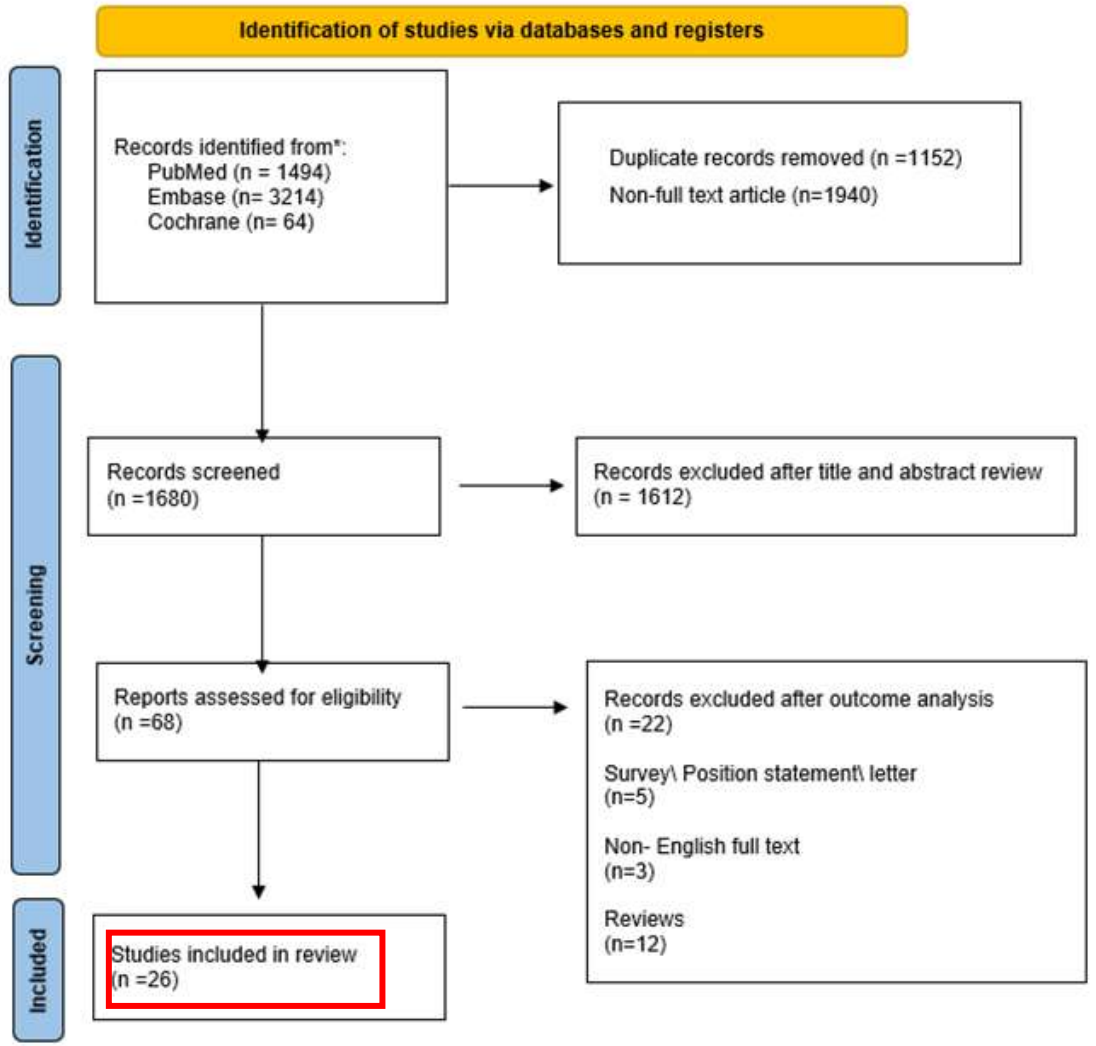
Search Strategy

- *In PubMed, Embase and Cochrane Library, an advanced search*
- *String of terms:(Obesity Surgery OR metabolic surgery OR bariatric surgery) AND (Revisional surgery OR conversion OR redo surgery OR Reintervention OR Reoperation OR Revision)*
- *Exclusion criteria were non-English language, non-original article or published before 2000, number of included patients less than 50, focus on less than 2 revisional /conversional operations*



Revisional Surgery

- ***4772 articles***
- ***26 articles***
- ***67408 patients***
- ***Between 2009 and 2023***
- ***Weight regain/persistence represents the main indication for revision/conversion in all the included studies,***
- ***In the older articles malnutrition was a frequent cause for a secondary operation***

First Author year)	Study design	number of patients	BMI	Reason for conversion/revision	Conversion/revision
Vahibe (2023)	retrospective	53	not available	Malnutrition	Revision
Vanetta (2022)	retrospective	20387	39.5 - 47.2	Weight regain, GERD, complications	Conversion
major (2022)	retrospective	799	48	Weight regain, complications	Conversion
Xie (2022)	retrospective	221	45.6	Weight regain, GERD, complications	Conversion
Hernandexz (2021)	retrospective	54	41.7	Weight regain, GERD, complications	Revision
Gero (2021)	retrospective	3143	35.2	Weight regain, GERD, complications	Revision/Conversion
Dreifuss (2021)	retrospective	76	45.7	Weight regain, GERD, complications	Revision/Conversion
King (2020)	retrospective	167	37-39.5	complications, Weight regain	Revision
Cheema (2021)	retrospective	266	39.8 - 45	Weight regain, GERD, complications	Revision/Conversion
El Chaar (2021)	retrospective	440	42.4	not available	Revision
Mora oliver (2020)	retrospective	112	41.9	weight regain	Conversion
Keren (2019)	retrospective	266	41.3	Weight regain(90%), complications	Revision/Conversion
Acevedo (2020)	retrospective	2288	40.9	not available	Revision/Conversion
Clapp (2019)	retrospective	37916	41.6	not available	Revision/Conversion
Aleassa (2019)	retrospective	81	41.2 - 47.2	Weight regain, complications	Revision/Conversion
Qiu (2018)	retrospective	84	38-42	Weight regain, complications	Revision/Conversion
Gray (2018)	retrospective	84	39-45	Weight regain, complications	Revision/Conversion
Souto (2018)	retrospective	67	36.9	Malnutrition, weight regain	Revision/Conversion
Fulton (2017)	retrospective	117	44.7	weight regain, Malnutrition	Revision/Conversion
Daigle (2016)	retrospective	121	47.5	weight regain	Revision/Conversion
Shimizu (2013)	retrospective	154	44	Weight regain, complications	Revision/Conversion
Kuesters (2011)	retrospective	100	28-62	Weight regain, complications	Revision/Conversion
Fronza (2010)	retrospective	63	38-41	weight regain, Malnutrition	Revision/Conversion
Spyropoulos (2010)	retrospective	56	46.9	weight regain, Malnutrition	Revision/Conversion
Lim (2009)	retrospective	75	46.3	weight regain, Malnutrition	Revision/Conversion
Nesset (2009)	retrospective	218	42	weight regain, complication, Malnutrition	Revision/Conversion

Revisional Surgery

- Recent articles mainly report conversion from restrictive procedures (AGB, SG)
- Revisional bariatric surgery is currently performed laparoscopically, with a growing trend toward robotic approach.
- Operative time and length of stay are currently comparable to primary surgery.
- All revisional/conversional interventions lead to further weight loss.
- Clavien- Dindo complications 3-4 ranged from 0.9 % to 26%.
- Mortality is lower than 1% for conversions from restrictive procedures but maximum rate of 11.9% was reported after revisional stapled procedures.
- Revisional surgery appears to induce further remission from TD2M and HTN.

laparoscopic / Robotic /open	intervention	operative time (min)	length of stay (days)	weight loss	Complication Clavien Dindo 1-2	Complications Clavien Dindo 3-4
laparoscopic	different types	not available	not available	not available	45.2%	not available
laparoscopic/robotic	different types	103 - 196.9	1.3 - 2.9	not available	3.8 %	9%
laparoscopic	different types	not available	3.5	33.4% WL; 14 Δ BMI	9.52%	4.76%
laparoscopic/robotic	different types	149.2	2	17.3% WL	7.7 %	3.1 %
laparoscopic	different types	not available	4.1	not available	not available	0.9% early and 1.8% late
laparoscopic	different types	93	not available	17.7% WL	not available	23.8%
robotic	different types	182	2.1	22.4 % WL	not available	3.9% early and 5.2% late
laparoscopic/robotic	different types	not available	5-2 - 5.8%	not available	5-2 - 5.8%	1.9 - 5.2%
laparoscopic	revisional RYGB,	not available	2	10-30% WL	not available	2.6 %
laparoscopic/robotic	different types	145.5	not available	not available	not available	3%
laparoscopic	different types	135.8	4.9	27.5% WL	3%	2.7%
laparoscopic/open	different types	not available	3.2	30.5% WL	4.8%	2.4
laparoscopic/robotic	different types	125.4	2.2	not available	not available	3.2%
laparoscopic/robotic	different types	103-167	1.7-2.3	10 Δ BMI	not available	not available
laparoscopic	different types	not available	not available	20.5 % WL	not available	not available
laparoscopic	different type	133-175	2	7.7 - 30.2 % WL	8.3%	6%
laparoscopic/robotic	different type	177 - 238	3.7 - 5.8	not available	not available	5.9%
laparoscopic	different types	not available	not available	28.7 - 77% EWL	not available	11.9%
laparoscopic/open	different types	168	4	61.2 % EWL	not available	10.8%
laparoscopic	different types	not available	6	59.4 % EWL	17%	3.3%
laparoscopic/open	different types	268 - 280	5.4 - 9.5	37.6 % EWL	10.3%	12.9 %
laparoscopic/open	different types	not available	not available	56 % EWL	not available	not available
laparoscopic/open	different types	not available	not available	> 50 % EWL	19%	11%
open	different types	210	16.5	68.9 % EWL	20.8 %	13.1%
laparoscopic/open	different types	152 - 231	2 - 5.8	47.8% EWL	17.3%	4.0%
open/laparoscopic	different types	298	9	13 Δ BMI	not available	26%

Conclusion

Revisional/conversional bariatric surgery is safely and effectively performed laparoscopically or with a robotic approach.

Main indication is weight regain/persistence

Hospital stay and operative time are comparable to primary surgery, but revisional/conversional bariatric operations have a higher complication/mortality rate

Further weight loss and remission from comorbidities is reachable after revision/conversion

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Thank you !!

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Researcher – University of Naples Federico II

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