



Surgical management of obesity

Bariatric surgery: patient and operation selection

GESA Gut Centre

Alice Springs Hospital

Jacob Chisholm

Bariatric/Upper GI surgeon

Flinders Medical Centre

13<sup>th</sup> August 2024





How to chose patients?

Which operation do we chose?

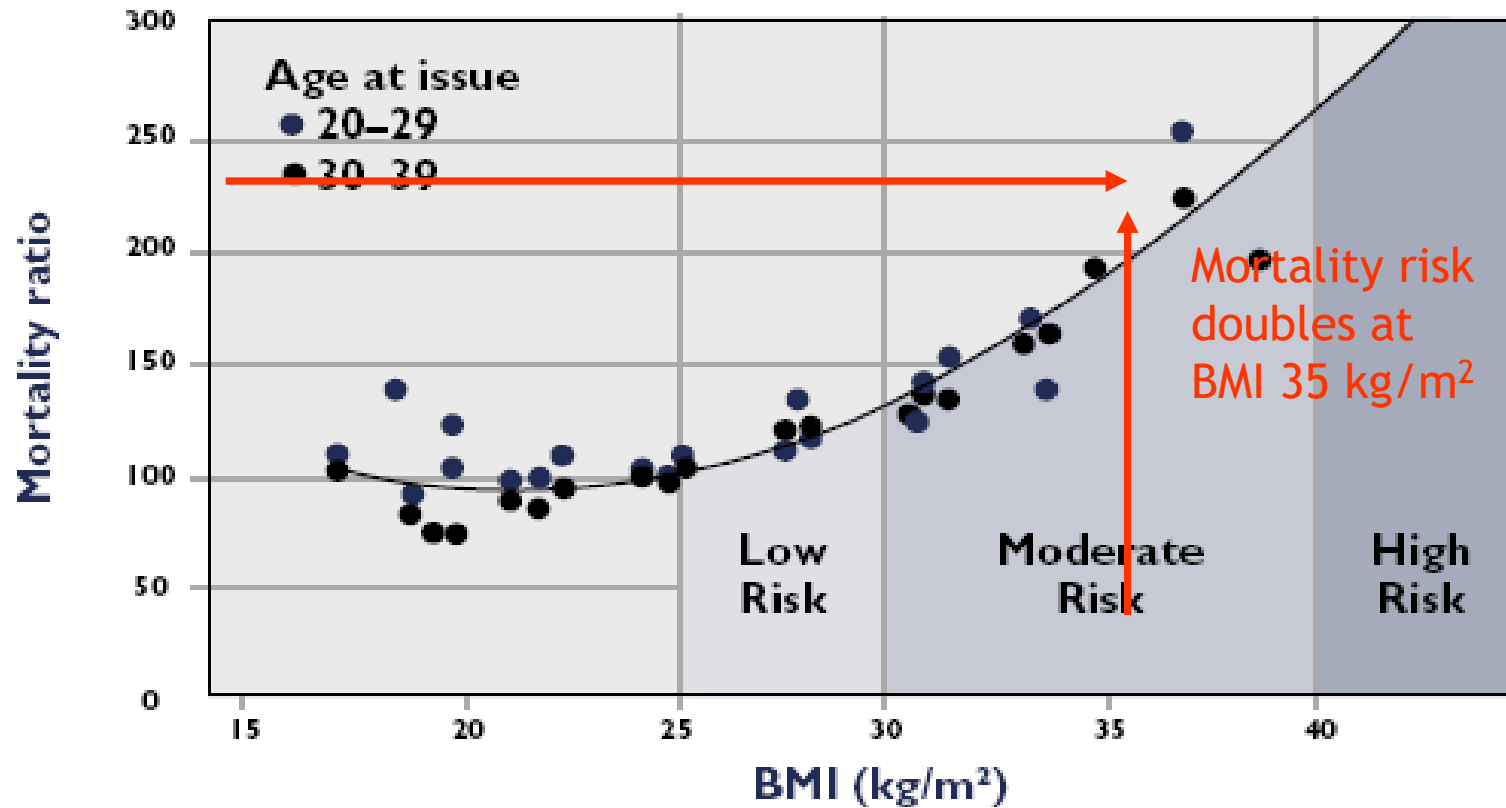
Which type of patients would you operate on?

Which type of patients would not operate on?

Public vs private

ASMBS/IFSO guidelines

# Obesity and mortality risk

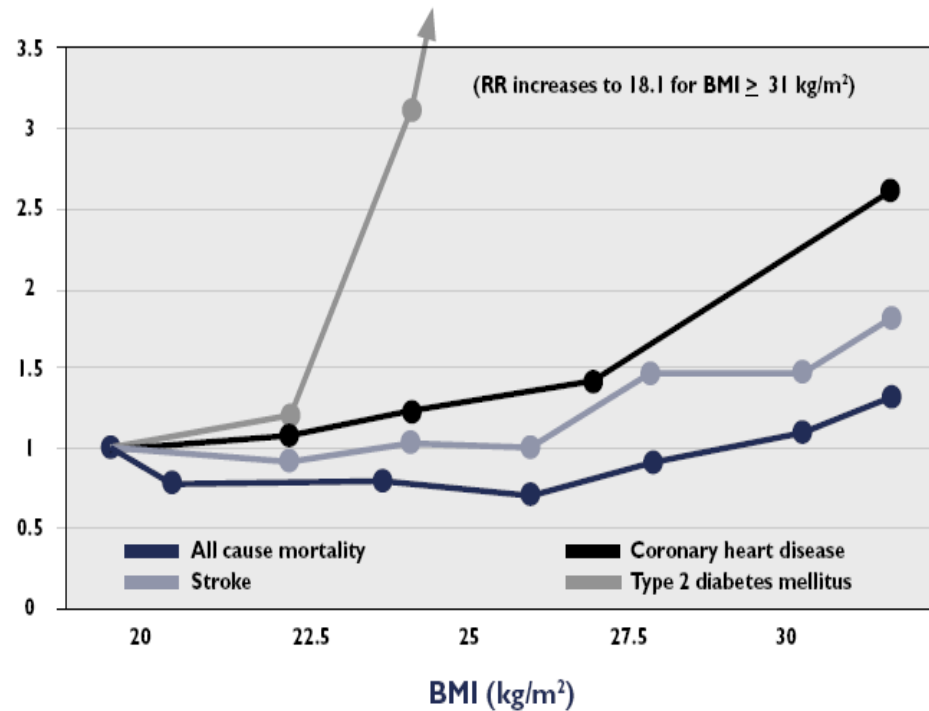


## Relative risk of co-morbidities, conditions and risks associated with obesity

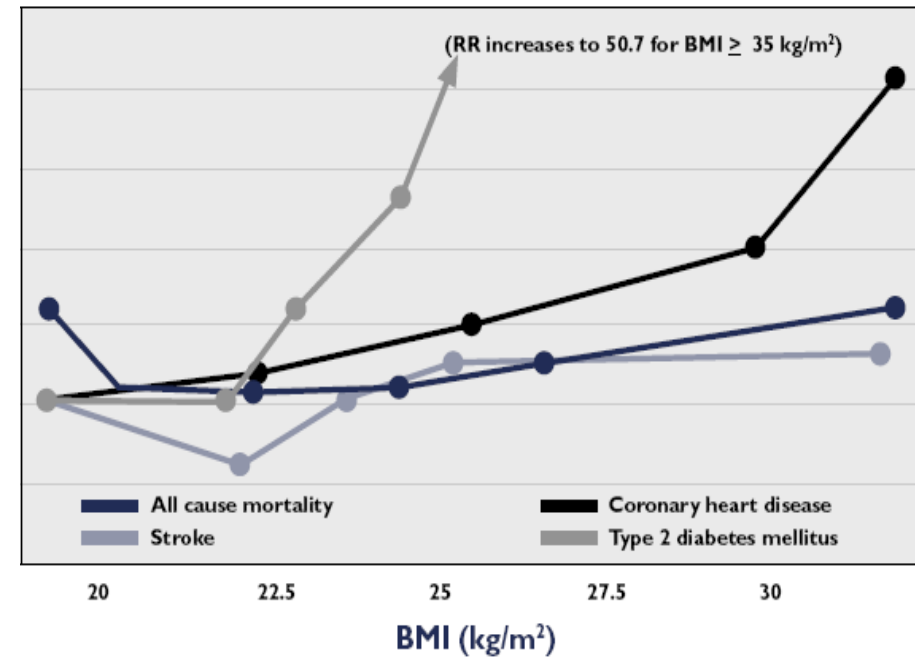
Relative risk >5	Relative risk 2–5	Relative risk 1–2
Type 2 diabetes	All cause mortality	Cancer mortality
Dyslipidaemia	Hypertension	Breast cancer
Obstructive sleep apnoea	Myocardial infarction and stroke	Prostate and colon cancer in men
Breathlessness	Endometrial carcinoma in women and hepatoma in men	Impaired fertility
Excessive daytime sleepiness	Gallstones and complications including cancer	Obstetric complications including foetal abnormalities
Obesity hypoventilation syndrome	Polycystic ovary syndrome	Asthma
Idiopathic intracranial hypertension	Osteoarthritis (knees)	Gastroesophageal reflux
Non-alcoholic steatohepatitis	Gout	Anaesthetic risk

# Age-adjusted relative risk for co-morbidities and mortality by BMI

Women in the US

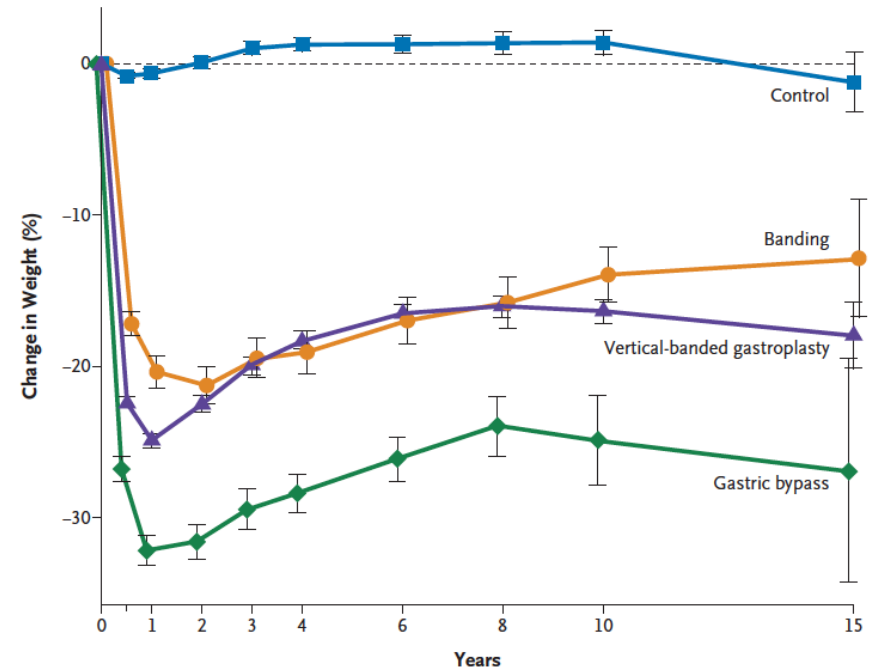


Men in the US



## Effects of Bariatric Surgery on Mortality in Swedish Obese Subjects

Lars Sjöström, M.D., Ph.D., Kristina Narbro, Ph.D., C. David Sjöström, M.D., Ph.D., Kristjan Karason, M.D., Ph.D., Bo Larsson, M.D., Ph.D., Hans Wedel, Ph.D., Ted Lystig, Ph.D., Marianne Sullivan, Ph.D., Claude Bouchard, Ph.D., Björn Carlsson, M.D., Ph.D., Calle Bengtsson, M.D., Ph.D., Sven Dahlgren, M.D., Ph.D., Anders Gummesson, M.D., Peter Jacobson, M.D., Ph.D., Jan Karlsson, Ph.D., Anna-Karin Lindroos, Ph.D., Hans Lönroth, M.D., Ph.D., Ingmar Näslund, M.D., Ph.D., Torsten Olbers, M.D., Ph.D., Kaj Stenlöf, M.D., Ph.D., Jarl Torgerson, M.D., Ph.D., Göran Ågren, M.D., and Lena M.S. Carlsson, M.D., Ph.D., for the Swedish Obese Subjects Study



### No. Examined

Control	2037	1768	1660	1553	1490	1281	982	886	190
Banding	376	363	357	328	333	298	267	237	52
Vertical-banded gastroplasty	1369	1298	1244	1121	1086	1004	899	746	108
Gastric bypass	265	245	245	211	209	166	92	58	10

**Figure 1.** Mean Percent Weight Change during a 15-Year Period in the Control Group and the Surgery Group, According to the Method of Bariatric Surgery.

I bars denote 95% confidence intervals.

# The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

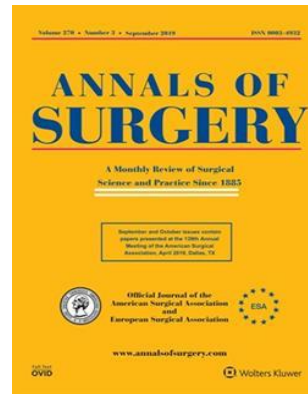
AUGUST 23, 2007

VOL. 357 NO. 8

ORIGINAL ARTICLE

## Weight and Metabolic Outcomes 12 Years after Gastric Bypass

Ted D. Adams, Ph.D., M.P.H., Lance E. Davidson, Ph.D., Sheldon E. Litwin, M.D.,  
Jaewhan Kim, Ph.D., Ronette L. Kolotkin, Ph.D., M. Nazeem Nanjee, Ph.D.,  
Jonathan M. Gutierrez, B.S., Sara J. Frogley, M.B.A., Anna R. Ibele, M.D.,  
Eliot A. Brinton, M.D., Paul N. Hopkins, M.D., M.S.P.H., Rodrick McKinlay, M.D.,  
Steven C. Simper, M.D., and Steven C. Hunt, Ph.D.



## Surgery Decreases Long-term Mortality, Morbidity, and Health Care Use in Morbidly Obese Patients

Nicolas V. Christou, MD, PhD, John S. Sampalis, PhD, Moïse Liberman, MD, Didier Look, MD,  
Stephane Auger, BSc, Alexander P.H. McLean, MD, and Lloyd D. MacLean MD, PhD

JAMA | Original Investigation

## Association of Bariatric Surgery Using Laparoscopic Banding, Roux-en-Y Gastric Bypass, or Laparoscopic Sleeve Gastrectomy vs Usual Care Obesity Management With All-Cause Mortality

Orna Reges, PhD; Philip Greenland, MD; Dror Dicker, MD; Morton Leibowitz, MD; Moshe Hoshen, PhD; Ilan Gofer,  
Laura J. Rasmussen-Torvik, PhD; Ran D. Balicer, MD

### NIH Consensus statement 1991

Patients must meet the following criteria for consideration for bariatric surgery:

- BMI  $>40$  kg/m<sup>2</sup> or BMI  $>35$  kg/m<sup>2</sup> with an associated medical comorbidity worsened by obesity
- Failed dietary therapy
- Psychiatrically stable without alcohol dependence or illegal drug use
- Knowledgeable about the operation and its sequelae
- Motivated individual
- Medical problems not precluding probable survival from surgery

→ **Decision based on a prudent evaluation of the risk/benefit ratio**

Era of open surgery

A very few surgical options



# BMI cutoff



# Age



## ANZMOSS

Australian & New Zealand  
Metabolic and Obesity Surgery Society

### Recommendations for bariatric surgery in adolescents in Australia and New Zealand

May 2022

### Adolescent patient criteria for selection of bariatric surgery

- BMI > 35 kg/m<sup>2</sup> or 120% of the 95<sup>th</sup> percentile with a comorbidity
  - Comorbidities can include type 2 diabetes, hypertension, nonalcoholic steatohepatitis, benign intracranial hypertension and obstructive sleep apnoea. It can also include comorbidities that may be unique to the adolescent including the psychosocial burden of obesity and orthopaedic diseases specific to children.
- BMI > 40 kg/m<sup>2</sup> or 140% of the 95<sup>th</sup> percentile without a comorbidity
- Consider age 14 in certain circumstances
- Tanner stage 4 or 5 pubertal development
- Attainment of final or near final adult height
- Persistence of obesity despite lifestyle modification and pharmacotherapy for a minimum of 6 months
- Able to provide informed consent

### Adolescent criteria where bariatric surgery not indicated

- Medically correctable cause of obesity
- Under the age of 14
- Medical, psychiatric or cognitive condition that prevents adherence to postoperative regime
- Pregnant or breast feeding

## DIABETES AND OPERATION.

A NOTE ON THE EFFECT OF GASTRO-JEJUNOSTOMY  
UPON A CASE OF MILD DIABETES MELLITUS  
WITH A LOW RENAL THRESHOLD.

BY O. LEYTON, M.D. CAMB., F.R.C.P. LOND.,  
PHYSICIAN TO THE LONDON HOSPITAL.

## THE AMELIORATION OF DIABETES MELLITUS FOLLOWING SUBTOTAL GASTRECTOMY

MURRY N. FRIEDMAN, M.D., F.A.C.S., ANTONIO J. SANCETTA, M.D., and  
GEORGE J. MAGOVERN, M.D., Brooklyn, New York

IN 1923, MURLIN noted the presence of a substance in extracts of the pancreas which could raise the blood sugar. Subsequently, this hyperglycemic factor was demonstrated

and duodenum. Therefore, when subtotal gastrectomy for duodenal ulcer resulted in marked amelioration of the diabetic state in 3 patients at the Brooklyn Veterans Hospi-

# Medical co-morbidities resolved after bariatric surgery: diabetes

ANNALS OF SURGERY  
Vol. 222, No. 3, 339-352  
© 1995 Lippincott-Raven Publishers

## Who Would Have Thought It?

### An Operation Proves to Be the Most Effective Therapy for Adult-Onset Diabetes Mellitus

Walter J. Pories, M.D., Melvin S. Swanson, Ph.D., Kenneth G. MacDonald, M.D.,  
Stuart B. Long, B.S., Patricia G. Morris, B.S.N., Brenda M. Brown, M.R.A.,  
Hisham A. Barakat, Ph.D., Richard A. deRamon, M.D., Gay Israel, Ed.D.,  
Jeanette M. Dolezal, Ph.D., and Lynis Dohm, Ph.D.

*From the Departments of Surgery and Biochemistry of the School of Medicine and the Human Performance Laboratory of East Carolina University, Greenville, North Carolina*

ORIGINAL ARTICLE

Bariatric Surgery versus Intensive Medical Therapy for Diabetes — 3-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., Stacy A. Brethauer, M.D., Sankar D. Navaneethan, M.D., M.P.H., Ali Aminian, M.D., Claire E. Pothier, M.P.H., Esther S.H. Kim, M.D., M.P.H., Steven E. Nissen, M.D., and Sangeeta R. Kashyap, M.D., for the STAMPEDE Investigators\*

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Bariatric Surgery versus Conventional Medical Therapy for Type 2 Diabetes

Geltrude Mingrone, M.D., Simona Panunzi, Ph.D., Andrea De Gaetano, M.D., Ph.D., Caterina Guidone, M.D., Amerigo Iaconelli, M.D., Laura Leccesi, M.D., Giuseppe Nanni, M.D., Alfons Pomp, M.D., Marco Castagneto, M.D., Giovanni Ghirlanda, M.D., and Francesco Rubino, M.D.

“In the past 3 years, 11 randomised controlled trials in nearly 800 patients have demonstrated consistent superiority of metabolic surgery vs. medical treatment of type 2 diabetes with respect to glycemic control and cardiovascular risk reduction”

**PHIL SCHAUER MD**  
Director, Bariatric and Metabolic Institute,  
Cleveland Clinic,  
Cleveland, Ohio, USA

**Adjustable Gastric Banding and Conventional Therapy for Type 2 Diabetes**  
A Randomized Controlled Trial

JAMA, January 23, 2008—Vol 299, No. 3 (Reprinted)

John B. Dixon, MBBS, PhD  
Paul E. O'Brien, MD  
Julie Playfair, RN  
Leon Chapman, MBBS  
Linda M. Schachter, MBBS, PhD  
Stewart Skinner, MBBS, PhD  
Joseph Proietto, MBBS, PhD  
Michael Bailey, PhD, MSc(stats)  
Margaret Anderson, BHealthMan

**Roux-en-Y Gastric Bypass vs Intensive Medical Management for the Control of Type 2 Diabetes, Hypertension, and Hyperlipidemia**  
The Diabetes Surgery Study Randomized Clinical Trial

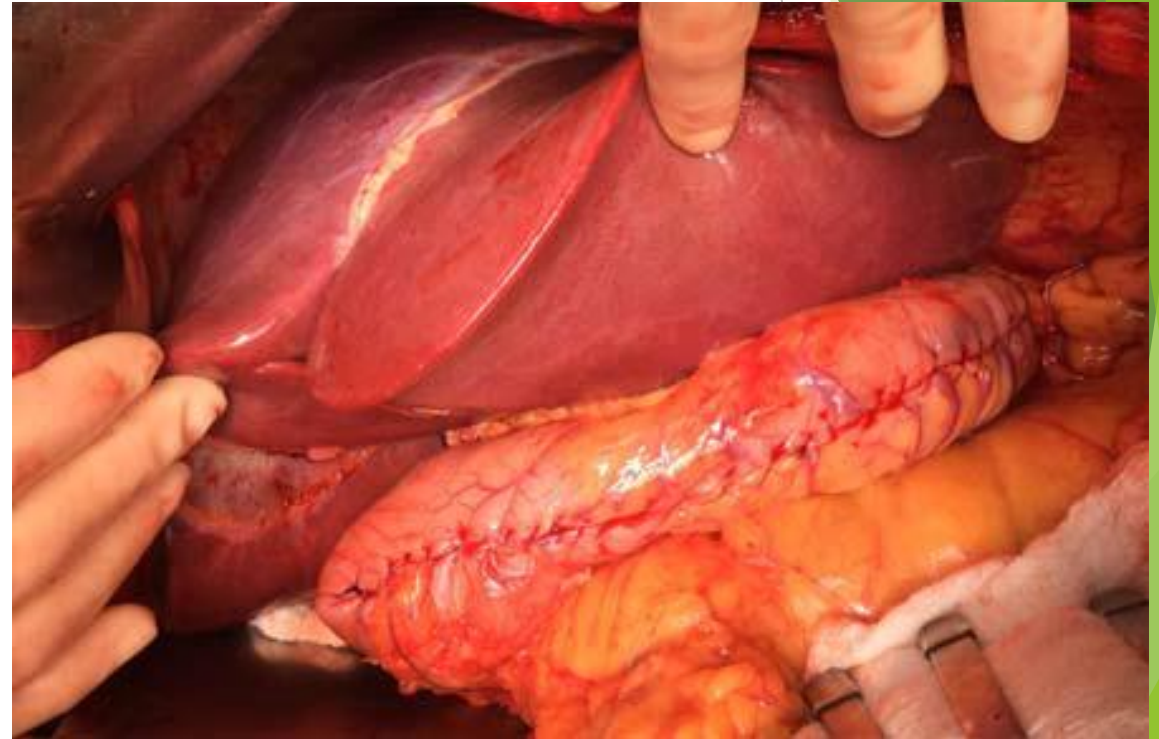
**2240** JAMA, June 5, 2013—Vol 309, No. 21

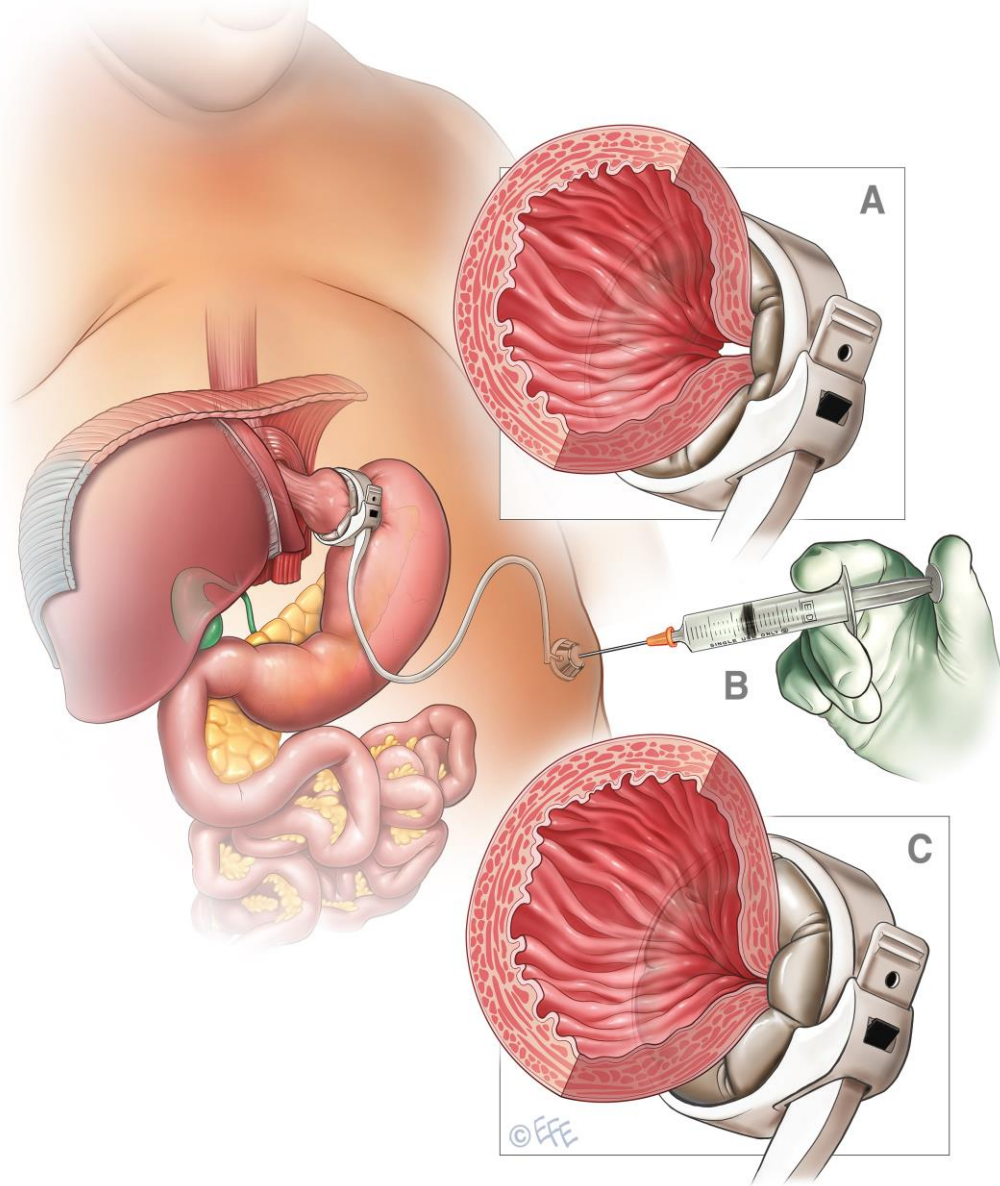
Sayed Ikramuddin, MD  
Judith Korner, MD, PhD  
Wei-Jei Lee, MD, PhD  
John E. Connett, PhD  
William B. Inabnet III, MD  
Charles J. Billington, MD  
Avis J. Thomas, MS  
Daniel B. Leslie, MD  
Keong Chong, MD  
Robert W. Jeffery, PhD  
Leaque Ahmed, MD  
Adrian Vella, MD  
Leo-Ming Chuang, MD, PhD  
Marc Bessler, MD  
Michael G. Sarr, MD  
James M. Swain, MD  
Patricia Laqua, RD  
Michael D. Jensen, MD  
John P. Bantle, MD

## Long-Term Outcomes of Patients Undergoing Simultaneous Liver Transplantation and Sleeve Gastrectomy

Daniel Zamora-Valdes,<sup>1</sup> Kimberly D. Watt,<sup>2</sup> Todd A. Kellogg,<sup>3</sup> John J. Poterucha,<sup>2</sup> Sara R. Di Cecco,<sup>2</sup>  
Nicki M. Francisco-Ziller,<sup>2</sup> Timucin Taner,<sup>1</sup> Charles B. Rosen,<sup>1</sup> and Julie K. Heimbach<sup>1</sup>

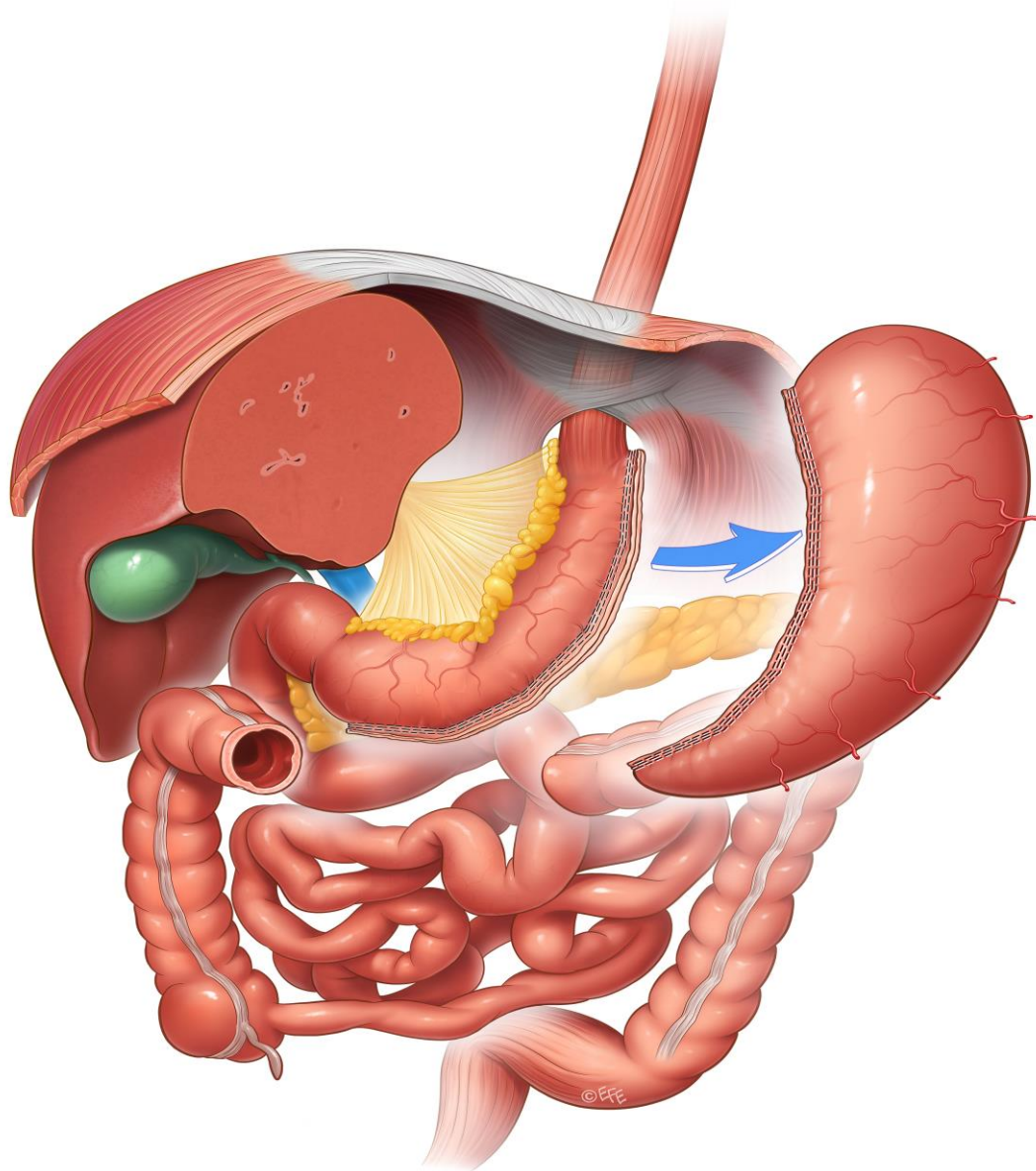
- 13 patients LT + SG > 3 years follow up
- Compared with LT alone 36 patients
- 13% vs 35% total body weight loss
- Lower prevalence of hypertension, insulin resistance and hepatic steatosis
- 1 staple line leak, 1 with excessive weight loss and 2 with reflux which stabilised





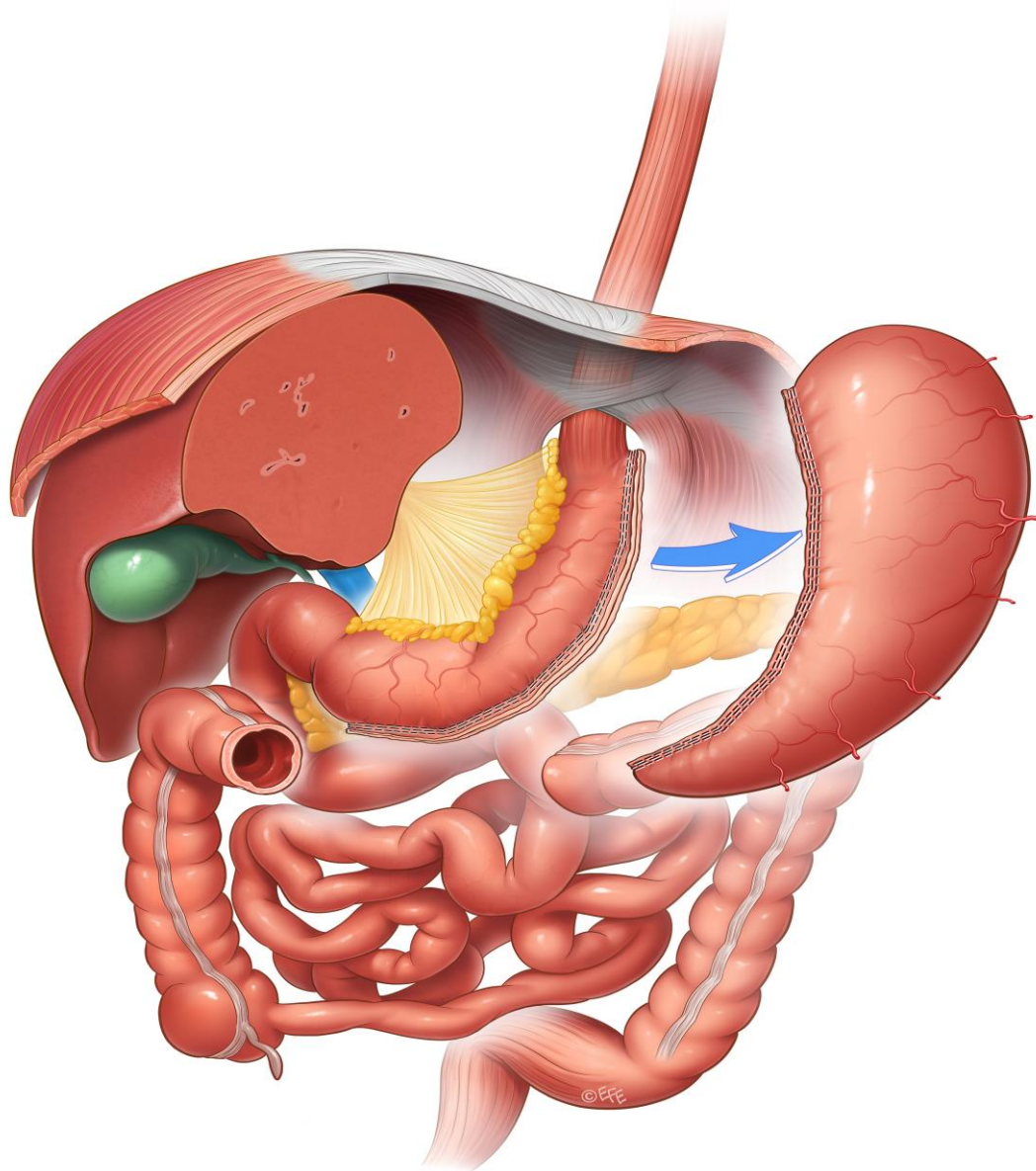
## Laparoscopic adjustable gastric band

- Restrictive
- Minimal access surgery
- Can adjust the degree of restriction - allows for lifelong adjustment
- Easily reversible
- Maintains gastric integrity
- Low-risk



## Sleeve gastrectomy

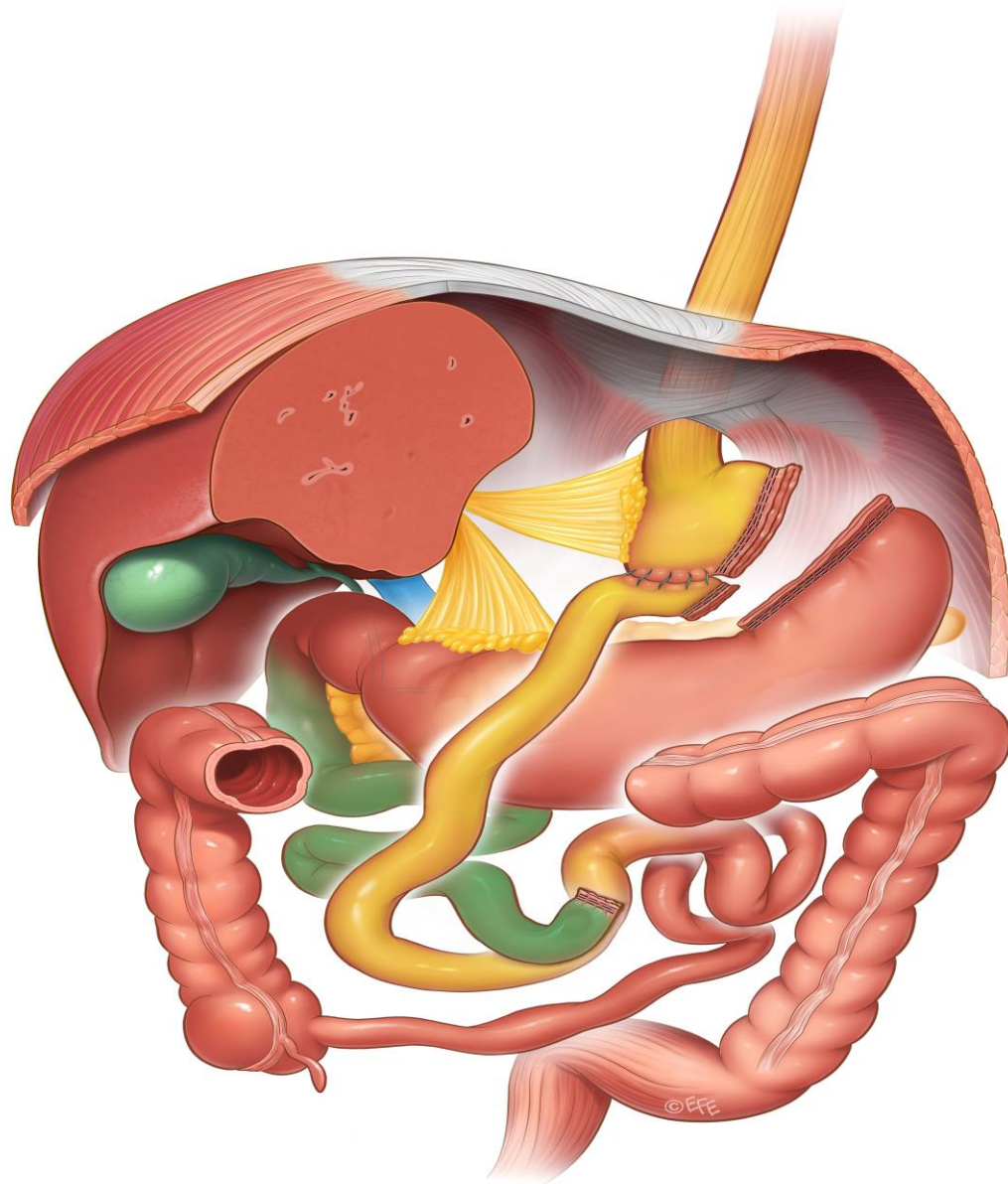
- Removing the lateral part of the stomach with a stapling device leaving a narrow tube instead of a stomach sack
- The residual stomach capacity is ~100 mL



## Sleeve gastrectomy

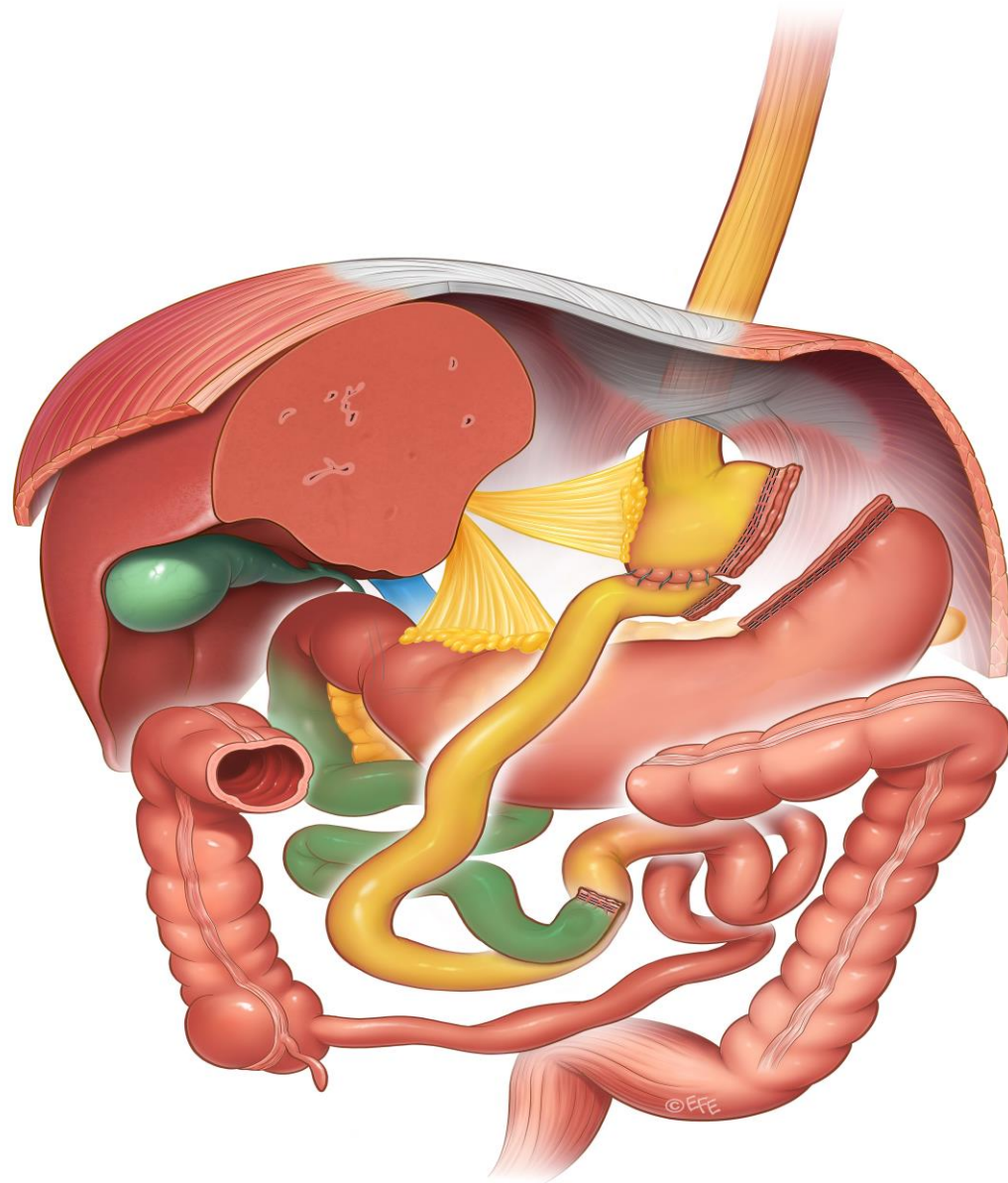
- Extremes of age
- Superobese
- Previous abdominal surgery
- Smoking





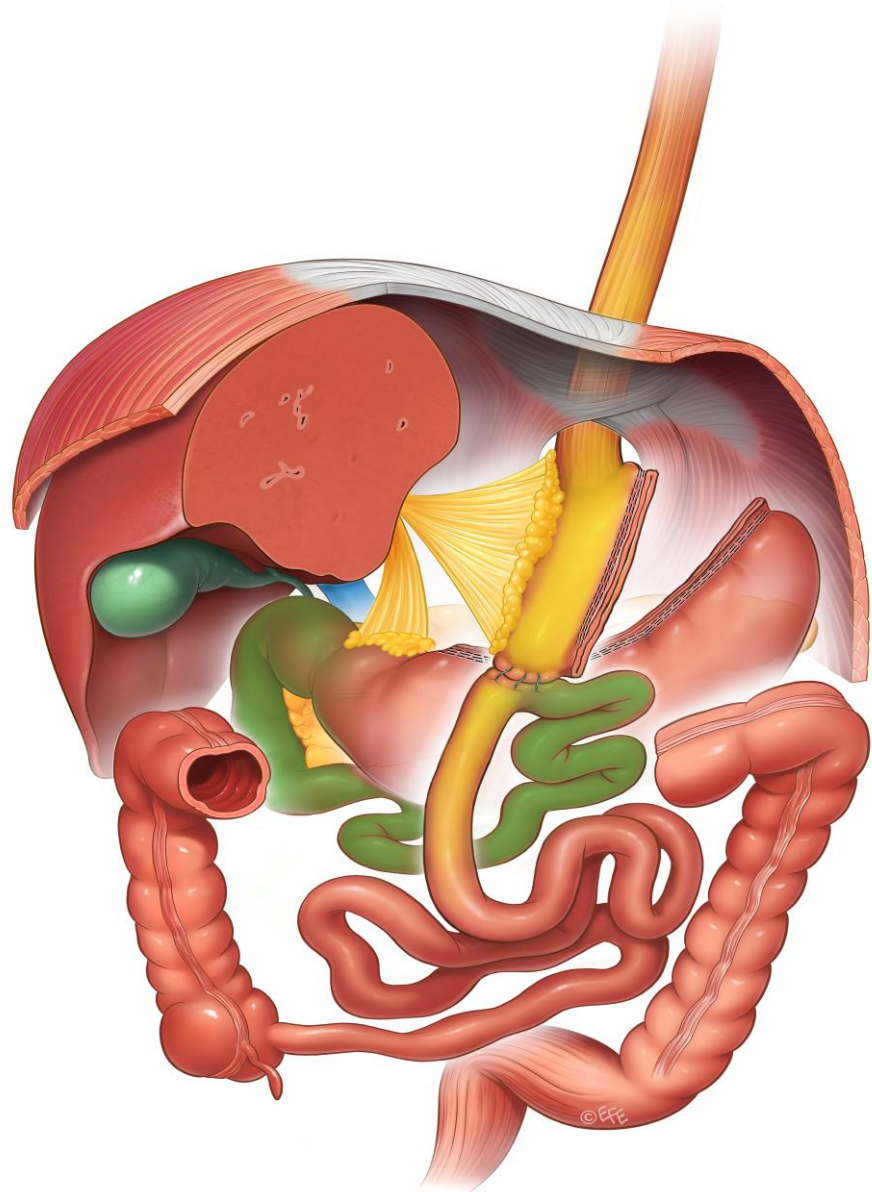
## Roux en Y gastric bypass

- First done in 1967
- Gold standard
- Small stomach pouch
- Bypass the lower stomach, duodenum and first portion of the jejunum. This reduces absorption of nutrients
- Laparoscopic
- Residual stomach capacity: 30-50 ml



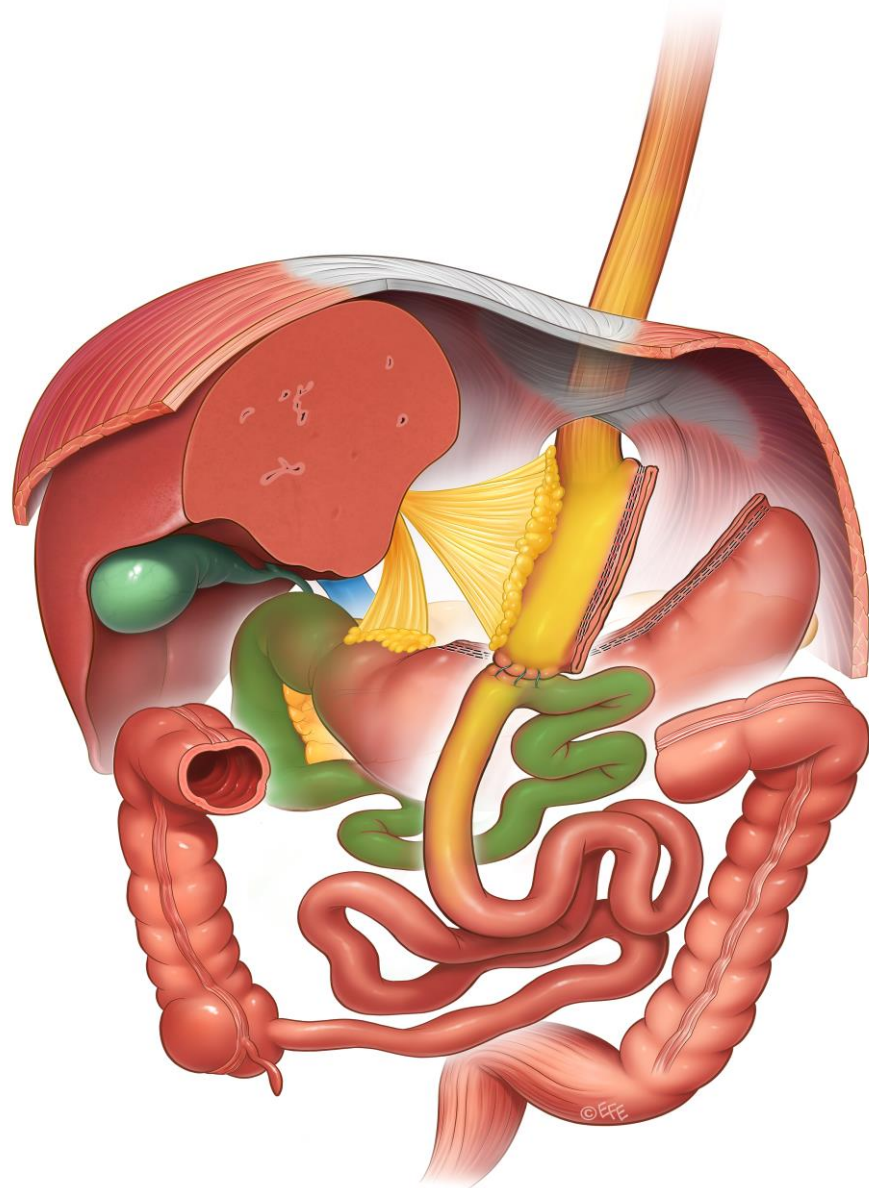
## Roux en Y gastric bypass

- Revisional surgery
- Type 2 diabetes mellitus
- Gastrooesophageal reflux



## One anastomosis gastric bypass

- One anastomosis
- Small gastric pouch
- 200 cm biliary limb
- Malabsorptive



## One anastomosis gastric bypass

- Type 2 diabetes mellitus
- Primary surgery

# Which patients would you not operate on?

- ▶ Severe heart failure
- ▶ End stage lung disease
- ▶ Active cancer treatment
- ▶ Portal hypertension
- ▶ Drug/alcohol dependency
- ▶ Impaired intellectual capacity
- ▶ Active psychosis
- ▶ Untreated eating disorders
- ▶ Major depression with active suicidal ideation

# 16,308

Primary Surgeries



- Sleeve (laparoscopic sleeve gastrectomy)
- RYGB (Roux-en-Y gastric bypass)
- OAGB (one anastomosis gastric bypass)
- Band (laparoscopic adjustable gastric band)
- Other

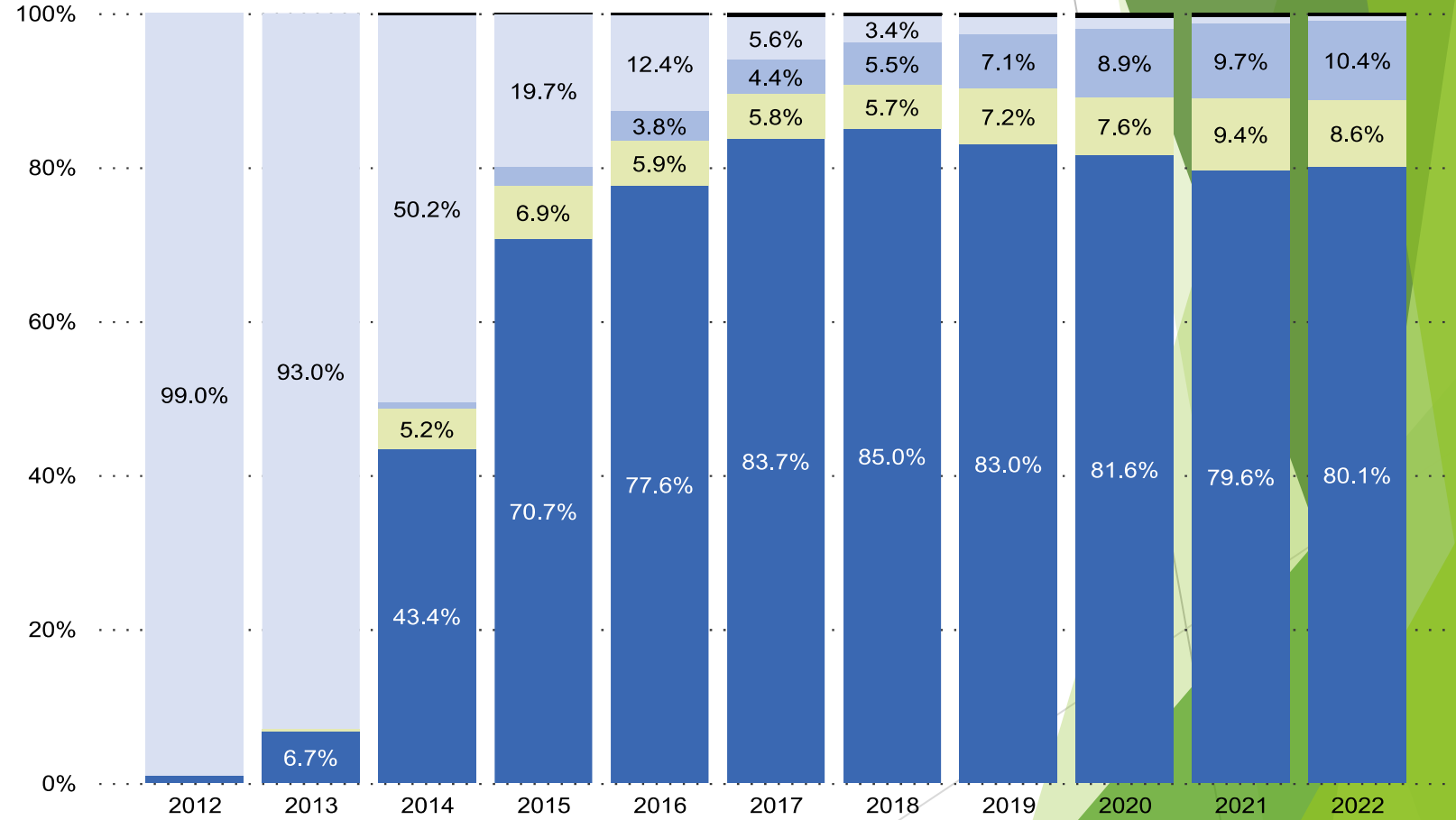


Figure 7 - Proportion of primary procedure type by year, Australia, n= 120,419

# Funding of Primary Surgery

- PUBLIC (3.2%)
- PRIVATE (96.8%)

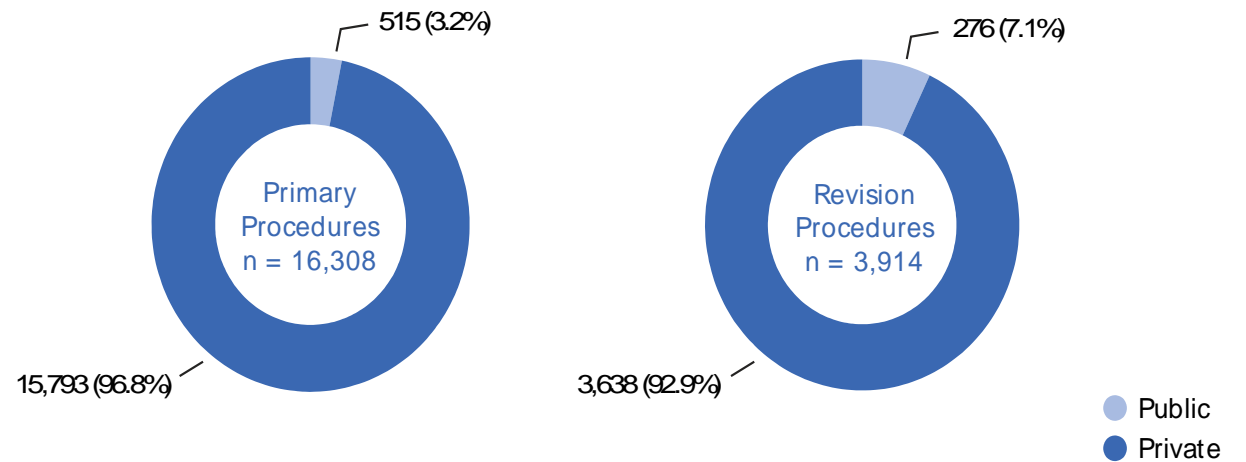
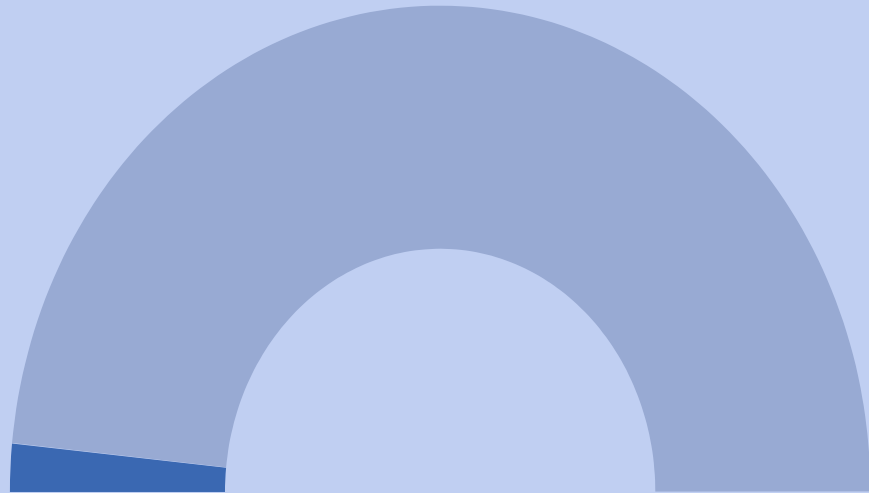


Figure 9 - Procedures by operation status and funding for 2022, Australia

# SA public bariatrics

- ▶ Long history
- ▶ Three centres
  - ▶ Flinders Medical Centre
  - ▶ Royal Adelaide Hospital
  - ▶ Queen Elizabeth

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## Gastric Surgery for Morbid Obesity

*The Adelaide Study*

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JOHN C. HALL, F.R.A.C.S.,\* JAMES McK. WATTS, F.R.A.C.S.,\* PAUL E. O'BRIEN, F.R.A.C.S.,\*  
RICHARD E. DUNSTAN, F.R.A.C.S.,† JOHN F. WALSH, F.R.A.C.S.,†  
ANTHONY H. SLAVOTINEK, F.R.A.C.S.,‡ and RONALD G. ELMSLIE, F.R.A.C.S.‡

---

**The efficacy of three gastric restriction operations were compared in a prospective randomized study of 310 morbidly obese subjects. The median patient age was 34 years (range, 18 to 62 years). They were predominantly female (12:1) and had a median BMI of 42.**

*From the Departments of Surgery, Flinders Medical Centre,\* The Royal Adelaide Hospital,† and The Queen Elizabeth Hospital,‡ Adelaide, South Australia*



# Flinders Medical Centre

- BMI clinic commenced May 2012
- ▶ Based at GP Plus in Marion Health Care Centre
- ▶ Multidisciplinary coordinated approach
- ▶ Aim of service:
  - Meet increasing demand
  - Clinical assessment process
  - Avoid surgery
  - Identify committed patients/improved selection process
  - Improve safety of surgery

# Flinders Medical Centre

- ▶ Nurse coordinator 1.0
- ▶ Physician 0.1
- ▶ Clinical psychologist 0.2
- ▶ Dietitian 0.3
- ▶ Exercise physiologist 0.2
- ▶ Diabetes nurse educator accessed when required

# Eligibility

## Referral criteria

- ▶ Adults between 18 and 60
- ▶ Have a BMI > 45 with 1 significant comorbidity or a BMI of 35 to 45 with 2 or more significant comorbidities
- ▶ Comorbidities
  - ▶ Impaired glucose tolerance
  - ▶ Diabetes mellitus
  - ▶ Obstructive sleep apnoea
  - ▶ Fatty liver
  - ▶ Impaired mobility
  - ▶ Hypertension
  - ▶ Cardiac failure
- ▶ Obese at least 5 years
- ▶ Previous weight reducing measures

# Flinders Medical Centre

## Referral pathway

- ▶ GP direct to BMI clinic
  - Referrer notified if not eligible
  - Letter acknowledging wait period
  - Bariatric Questionnaire
- ▶ Fast track
  - ▶ Awaiting renal transplant/post liver transplant
  - ▶ Idiopathic intracranial hypertension

# Model of care

- ▶ 6 month programme
- ▶ 1 x 60 minute initial assessment by physician and registered nurse
- ▶ 2 x 30 minute review appointments with:
  - ▶ Dietitian
  - ▶ Exercise physiologist
  - ▶ Clinical psychologist
  - ▶ Diabetes educator
- ▶ Group sessions started October 2016

# Case conferences

- ▶ Monthly multidisciplinary case conferences
- ▶ 1 of 3 surgeons from Flinders attending
- ▶ 6 to 12 patients who have completed programme discussed
- ▶ Suitability and safety
- ▶ Assessment “readiness for surgery”
- ▶ Is surgery still preferred option?

# Surgery

- ▶ Reviewed within 6 weeks at Flinders Medical Centre
- ▶ Endoscopy, ultrasound, blood tests
  - ▶ Further 2 month wait
- ▶ Final decision regarding operation choice
  - ▶ Date for surgery further 3 months away
- ▶ Flinders Medical Centre
- ▶ 3 month winter moratorium on surgery at FMC since 2013

# Postoperatively

- ▶ Not outsourced to private sector
- ▶ Surgeon at 4 weeks and ongoing until.....
- ▶ Postoperative service commenced at BMI clinic
  - ▶ Monthly postop support for 12 months
  - ▶ Discharge at 12 months to GP
- ▶ **Plastic surgery guidelines**
  - ▶ Reduction in BMI by 5 points
  - ▶ Weight steady for 6 months
  - ▶ Intertrigo/rash that impairs daily living



# Problems

- ▶ Where do you start!
  - ▶ Rural patients
  - ▶ Revisional surgery blocking access to primary patients
  - ▶ Private patients in public system
  - ▶ Data collection

# Weight Management Service Records

## 2022

- ▶ Total waitlist: 223
- ▶ WMS program: **55** (Jan-Dec)
- ▶ WMS pending: **60** (2023)

## 2023

- Total waitlist: 225 (till sept 23)
- WMS program: 30
- WMS pending: 16 (2023)

### Estimated waiting times

- GP referral to WMS Clinic CNC review - 2 weeks
- GP referral to commencing WMS program - est 3 years
- Completion of WMS program to surgeon review - 6-mths

Public vs private

# Public Bariatric Surgery

## A National Framework

February 2020

ANZMOSS & Collaborative Public Bariatric Surgery Taskforce



**ANZMOSS**

Australian & New Zealand  
Metabolic and Obesity Surgery Society

2022 ASMBS/IFSO guidelines indications for metabolic  
and bariatric surgery:  
Is this the most significant change in the last 30 years?

*Dr Jacob Chisholm  
Consultant Bariatric Surgeon  
Flinders Medical Centre  
Adelaide Bariatric Centre  
Adelaide, South Australia*



- Why do we need new guidelines?
- History of the 1991 NIH guidelines and past consensus statements
- 2022 ASMBS/IFSO MBS Guidelines

## Who is eligible for Bariatric Surgery?

### *NIH Consensus statement 1991*

Patients must meet the following criteria for consideration for bariatric surgery:

- BMI  $>40$  kg/m<sup>2</sup> or BMI  $>35$  kg/m<sup>2</sup> with an associated medical comorbidity worsened by obesity
- Failed dietary therapy
- Psychiatrically stable without alcohol dependence or illegal drug use
- Knowledgeable about the operation and its sequelae
- Motivated individual
- Medical problems not precluding probable survival from surgery

Can we practice bariatric surgery with 32 year old guidelines?



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



### History of the NIH Consensus Statement

1978-1991

The NIH hosted Consensus Conferences on Gastrointestinal Surgery for Severe Obesity for the purpose of summarizing the state of knowledge in the field of metabolic and bariatric surgery (MBS) as determined by an evolving panel of experts who reviewed available published scientific literature and presentations

The image shows the cover of the NIH Consensus Statement report titled 'Gastrointestinal Surgery for Severe Obesity'. The cover features a dark purple background with a large, light blue, abstract shape that resembles a stylized stomach or intestines. The title is written in white serif font across the middle of the cover.

Gastrointestinal Surgery for Severe Obesity

## **Gastrointestinal Surgery for Severe Obesity**

National Institutes of Health  
Consensus Development Conference Statement  
March 25-27, 1991



Acceptance bariatric surgery as an appropriate treatment  
for severe obesity and its related diseases





## NIH Consensus statement 1991

Patients must meet the following criteria for consideration for bariatric surgery:

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- Medical problems not precluding probable survival from surgery

→ **Decision based on a prudent evaluation of the risk/benefit ratio**

Era of open surgery

A very few surgical options

1991:State of the Art

**1998**

## **1991 NIH Criteria are outdated**

“This statement is more than five years old and is provided solely for **historical purposes.**”

Due to the cumulative nature of medical research, new knowledge has inevitably accumulated in this subject area in the time since the statement was initially prepared. Thus, some of the material is likely to be **out of date**, and at worst, **simply wrong.**”

<http://www.nlm.nih.gov/medlineplus/>

## 1998

A panel of experts in obesity and health policy examined emerging criteria for construction of new evidence-based guidelines. The panelists (no surgeons)

- did not include laparoscopic approach to the procedures
- made no mention of implementation of national accreditation
- did not consider the clinical evidence based on randomized control trials (RCTs)
- found no basis to alter the conclusions of the 1991 consensus panel

→ **recommendations = 1991 consensus panel**

### *NIH Consensus statement 1991*

Patients must meet the following criteria for consideration for bariatric surgery:

- BMI  $>40$  kg/m<sup>2</sup> or BMI  $>35$  kg/m<sup>2</sup> with an associated medical comorbidity worsened by obesity
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- Medical problems not precluding probable survival from surgery

## 2007

NIH appointed a new panel of experts (including one surgeon) to update the 1998 guidelines.

- selection of evidence-based research papers
- prolonged, 5-year process, the panel issued NIH's Systematic Evidence Review from the Obesity Expert Panel
- referred the review and publication of any additional guidelines to the AHA, the ACC, and TOS



NIH has no official medical or surgical position, consensus statement, or guideline regarding the treatment of obesity

**2007**

NIH formally retired the Consensus Development Program  
(concluded the organization of consensus conferences of any type)



No updates to the 1991 Consensus Statement

### ***NIH Consensus statement 1991***

Patients must meet the following criteria for consideration for bariatric surgery:

- BMI  $>40$  kg/m<sup>2</sup> or BMI  $>35$  kg/m<sup>2</sup> with an associated medical comorbidity worsened by obesity
- Failed dietary therapy
- Psychiatrically stable without alcohol dependence or illegal drug use
- Knowledgeable about the operation and its sequelae
- Motivated individual
- Medical problems not precluding probable survival from surgery

## **2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults**

### **A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society**

*Endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation, American Pharmacists Association, American Society for Nutrition, American Society for Parenteral and Enteral Nutrition, American Society for Preventive Cardiology, American Society of Hypertension, Association of Black Cardiologists, National Lipid Association, Preventive Cardiovascular Nurses Association, The Endocrine Society, and WomenHeart: The National Coalition for Women With Heart Disease*

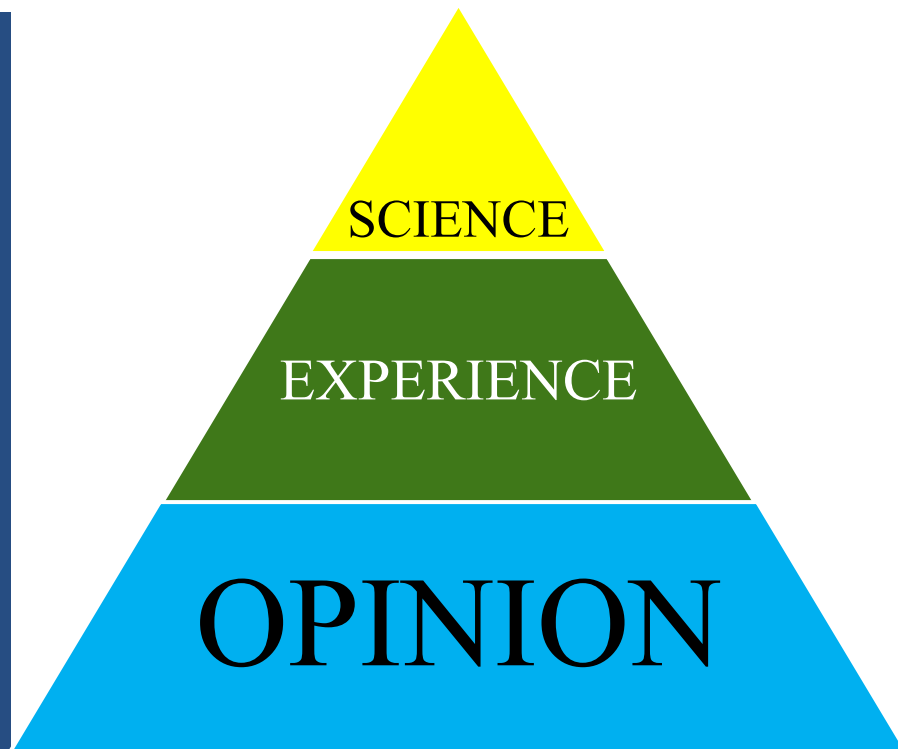


the evidence → insufficient to either endorse or discourage  
surgical intervention for patients with BMI <35 kg/m<sup>2</sup>



no update to the 1991 consensus statement

1991 NIH Criteria for BS  
Guidelines for MBS



2022 ASMBS/IFSO



## What Has Changed BMS Since 1991

1. Marked increase in the incidence of obesity
2. Introduction of new procedures (LAGB, DS, sleeve, OAGB, SADI )
3. Improved safety of the procedures
4. Adoption of laparoscopic minimally invasive surgery,
5. Development of advanced instrumentation in laparoscopic, endoscopic & robotics
6. Widely available surgeon training
7. Understanding physiological mechanisms of BMS
8. Improved patient care ERAMBS
9. Increased experience with MDT management
10. Better understanding of the comorbid conditions
11. Documentation that delaying surgery diminishes its effectiveness
12. Demonstration that BMS improves quality of life
13. Data that demonstrates that BMS is cost effective
14. 32 years more experience with BMS





International Federation for the Surgery of Obesity & Metabolic Disorders  
74 national member societies  
>10 000 members



American Society for Metabolic and Bariatric Surgery  
is the largest national society for BMS  
>4 000 members



## **Bariatric Surgery in Class I Obesity 2014**

**A Position Statement from the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO)**

**Luca Busetto • John Dixon • Maurizio De Luca •  
Scott Shikora • Walter Pories • Luigi Angrisani**



- 10 recommendations supporting BS  
in patients with a lower BMI 30-35

## **Indications for Surgery for Obesity and Weight-Related Diseases: Position Statements from the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) 2016**

**Maurizio De Luca<sup>1</sup> • Luigi Angrisani<sup>2</sup> • Jacques Himpens<sup>3</sup> • Luca Busetto<sup>4</sup> •  
Nicola Scopinaro<sup>5</sup> • Rudolf Weiner<sup>6</sup> • Alberto Sartori<sup>1</sup> • Christine Stier<sup>6</sup> •  
Muffazal Lakdawala<sup>7</sup> • Aparna G. Bhasker<sup>7</sup> • Henry Buchwald<sup>8</sup> • John Dixon<sup>9</sup> •  
Sonja Chiappetta<sup>6</sup> • Hans-Christian Kolberg<sup>10</sup> • Gema Frühbeck<sup>11</sup> • David B. Sarwer<sup>12</sup> •  
Michel Suter<sup>13</sup> • Emanuele Soricelli<sup>14</sup> • Mattias Blüher<sup>15</sup> • Ramon Vilallonga<sup>16</sup> •  
Arya Sharma<sup>17</sup> • Scott Shikora<sup>18</sup>**





## Bariatric surgery in class I obesity (body mass index 30–35 kg/m<sup>2</sup>) 2013

ASMBS Clinical Issues Committee

Surgery for Obesity and Related Diseases, 2013-01-01, Volume 9, Issue 1, Pages e1-e10, Copyright © 2013 American Society for Metabolic and Bariatric Surgery

## ASMBS updated position statement on bariatric surgery in class I obesity (BMI 30–35 kg/m<sup>2</sup>) 2018

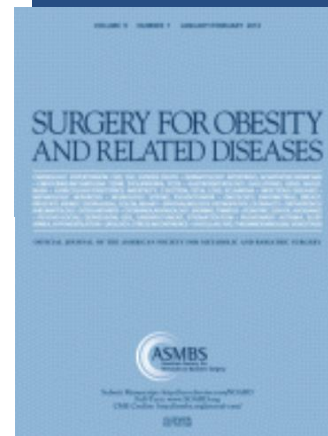
Ali Aminian, Julietta Chang, Stacy A Brethauer and Julie J. Kim

Surgery for Obesity and Related Diseases, 2018-08-01, Volume 14, Issue 8, Pages 1071-1087, Copyright © 2018 American Society for Bariatric Surgery

## ASMBS Position Statement on medium- and long-term durability of weight loss and diabetic outcomes after conventional stapled bariatric procedures 2018

Dan Azagury M.D., Pavlos Papasavas M.D., Isam Hamdallah M.D., Michel Gagner M.D. and Julie Kim M.D.

Surgery for Obesity and Related Diseases, 2018-10-01, Volume 14, Issue 10, Pages 1425-1441, Copyright © 2018 American Society for Bariatric Surgery

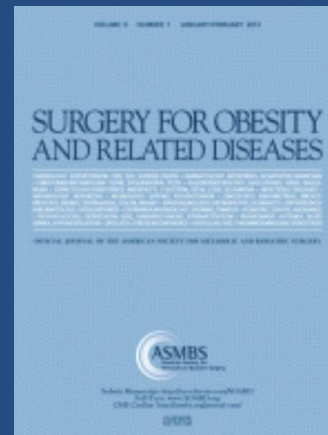




## ASMBS position statement on the relationship between obesity and cancer, and the role of bariatric surgery: risk, timing of treatment, effects on disease biology, and qualification for surgery 2020

Saber Ghiassi M.D., Maher El Char M.D., Essa M. Aleassa M.D., Fady Moustarah M.D., Sofiane El Djouzi M.D., T. Javier Birriel M.D. and Ann M. Rogers M.D.

Surgery for Obesity and Related Diseases, 2020-06-01, Volume 16, Issue 6, Pages 713-724, Copyright © 2020 American Society for Bariatric Surgery



## ASMBS Position Statement on the Impact of Metabolic and Bariatric Surgery on Nonalcoholic Steatohepatitis

  2020

Guilherme S. Mazzini M.D., Ph.D., Toms Augustin M.D., M.P.H., Sabrena Noria M.D., Ph.D., Carlos Romero-Marrero M.D., Na Li M.D., Ph.D., Bilal Hameed M.D., Dan Eisenberg M.D., M.S., Dan E. Azagury M.D., F.A.C.S. and Sayeed Ikramuddin M.D., M.H.A.

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

## Developed to Replace the NIH Consensus Guidelines from 1991

### Methods



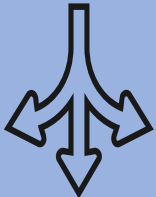
1991 consensus guidelines



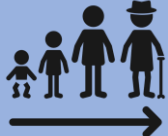
Literature review & update



Procedure type



Indications



Age limit

### Results



Others

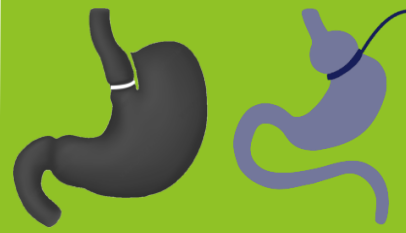
Historic & decreasing



BPD/DS



OAGB



VBG

LAGB

SURGERY FOR OBESITY AND RELATED DISEASES



Dan Eisenberg MD, MS, Scott A. Shikora MD, Edo Aarts MD, PhD, Ali Aminian MD, Luigi Angrisani MD, Ricardo V. Cohen MD, PhD, Maurizio de Luca MD, Silvia L. Faria PhD, Kasey P.S. Goodpaster PhD, Ashraf Haddad MD, Jacques M. Himpens MD, PhD, Lilian Kow BMBS, PhD, Marina Kurian MD, Kamal Mahawar MBBS, MS, MSc, FRCSEd, Ken Loi MBBS, BSc (Med), Abdelrahman Nimeri MD, MBBCh, Mary O’Kane MSc, RD, Pavlos K. Papasavas MD, Jaime Ponce MD, Janey S.A. Pratt MD, Ann M. Rogers, MD, Kimberley E. Steele, MD, PhD, Michel Suter, MD, Shanu N. Kothari MD Oct 2022 OBSU SOARD

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1991 consensus guidelines

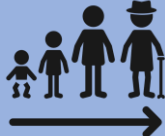
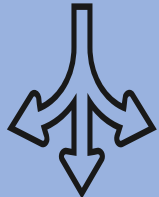
National Institutes of Health



Literature review & update



Procedure type



Age limit



Indications

### Results



Indications expanded



+



BMI 30-34.9

Related medical problems



±



BMI ≥ 35

Related medical problems

SURGERY FOR OBESITY AND RELATED DISEASES



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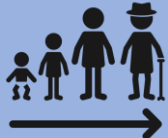
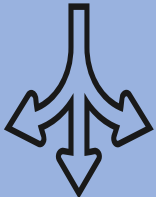
National Institutes of Health



Literature review & update



Procedure type



Age limit

Indications



### Results



Indications expanded



Asians threshold



BMI 25-27.5

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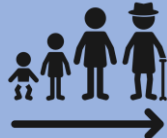
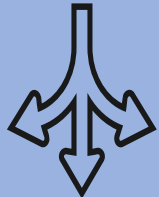
National Institutes of Health



Literature review & update



Procedure type



Age limit

Indications



### Results



Age limits expanded



Age  $\geq 70$



Frailty



Risk Vs Benefit



Children/  
Adolescents



BMI  $>120\%$   
95<sup>th</sup> P<sub>C</sub> +

Related medical problems

BMI  $>140\%$   
95<sup>th</sup> P<sub>C</sub>

SURGERY FOR OBESITY AND RELATED DISEASES



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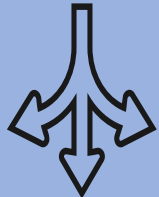
National Institutes of Health



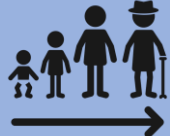
Literature review & update



Procedure type



Indications



Age limit

### Results



Special population



Bridge to joint replacement > 2 yrs prior



Bridge to abdominal wall hernia



Bridge to organ transplant

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1991 consensus guidelines

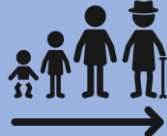
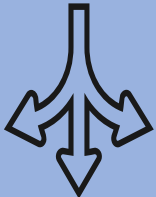
National Institutes of Health



Literature review & update



Procedure type



Age limit

Indications

### Results



Higher risk population:  
Surgery is still safe



BMI >60



Patients with cirrhosis



Patients in need for LVAD

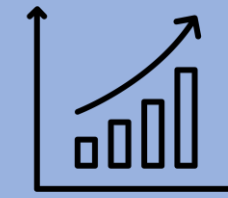
### Conclusion



New 2022 joint ASMBS/IFSO guidelines :



Expand indications & access



With improved efficacy, durability and safety

SURGERY FOR OBESITY AND RELATED DISEASES



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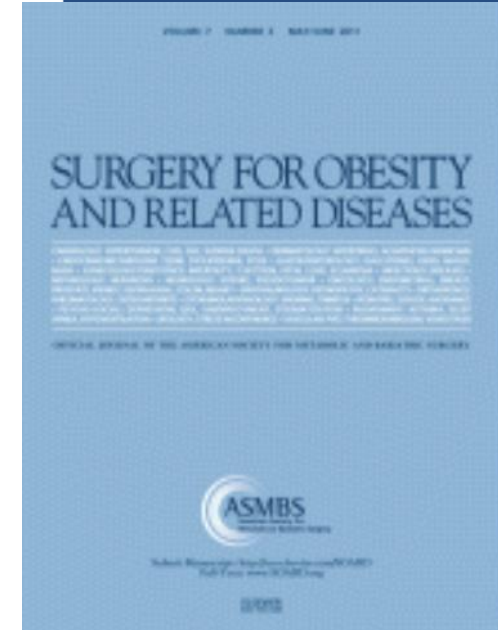
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- ▶ Obesity Surgery and SOARD : joint agreement on publication of the guidelines paper
- ▶ Open Access in both journals
- ▶ October 2022



Thank-you