

# Definition of clinical obesity and the implications for Clinical Practice: Surgeon's perspective

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**President Brazilian Society for Metabolic and Bariatric Surgery (SBCBM) (2011-2012)**

**President IFSO LAC (2018-2019)**

# Disclosures

Research Grant, J&J Medical, Brasil

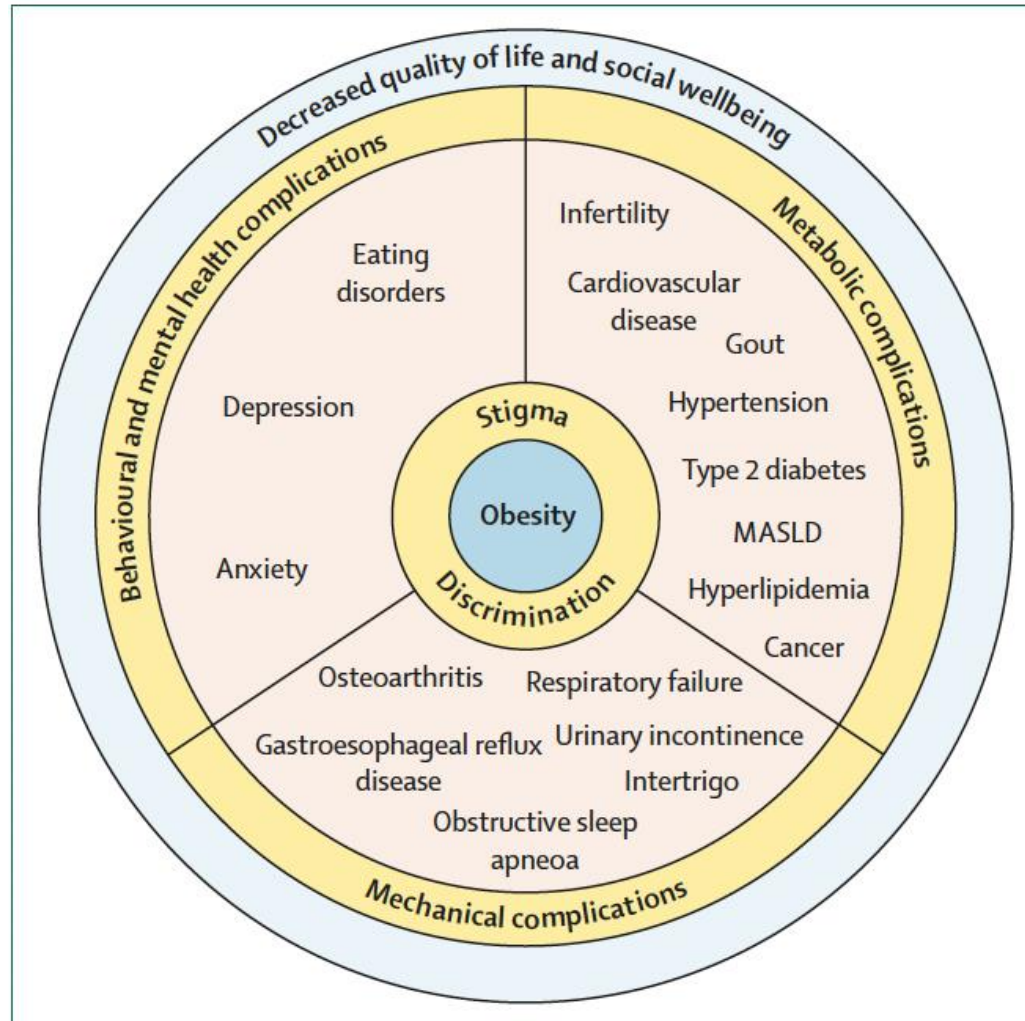
Research Grant, Medtronic

Research Grant, GI Dynamics

Research Grant, Hospital Oswaldo Cruz Bioscience Institute

SAB: Morphic medical, JJ Medical, Medtronic

Speaker: J&J Medical, Medtronic, NovoNordisk



**Pharmacotherapy:  
>10%**

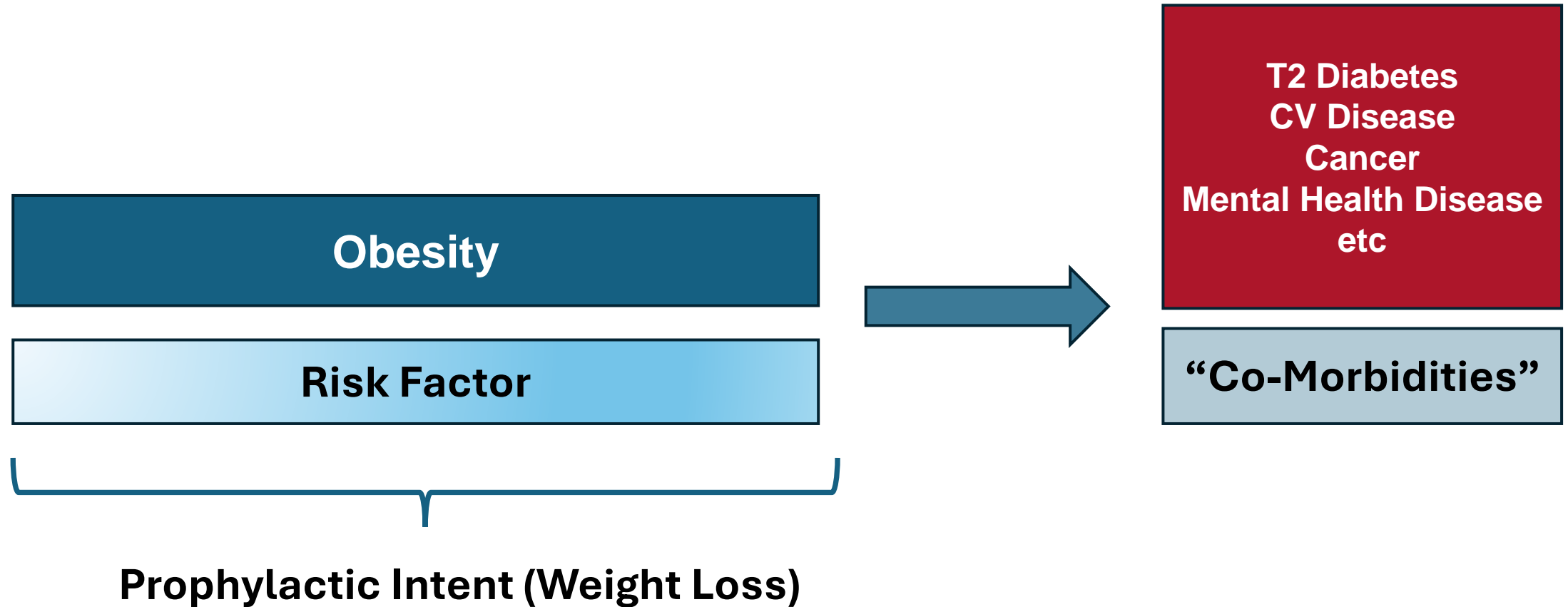
**20-30% are  
non-responders/tolerance**

**Metabolic surgery:  
1-3%**

**All people living  
with obesity**

# Consequences of Current Framing of Obesity

# Current “Treatment“ of Obesity has prophylactic intent – regardless of clinical severity



We make lots  
of efforts to  
increase  
access to  
MBS



## **Quackery:**

“Misrepresentation of the ability of a substance, a device, or a person to prevent or treat disease.”





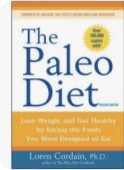
Nmami Life Don't Fall For Fad Diets Nmami Life



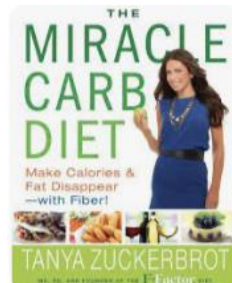
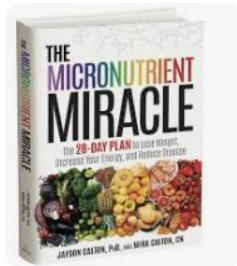
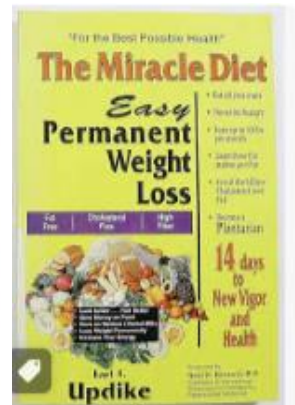
Delicious Living infographic] Ditch t...



Nutrition, Wellness, ... Fad Diets | Eclectic ...



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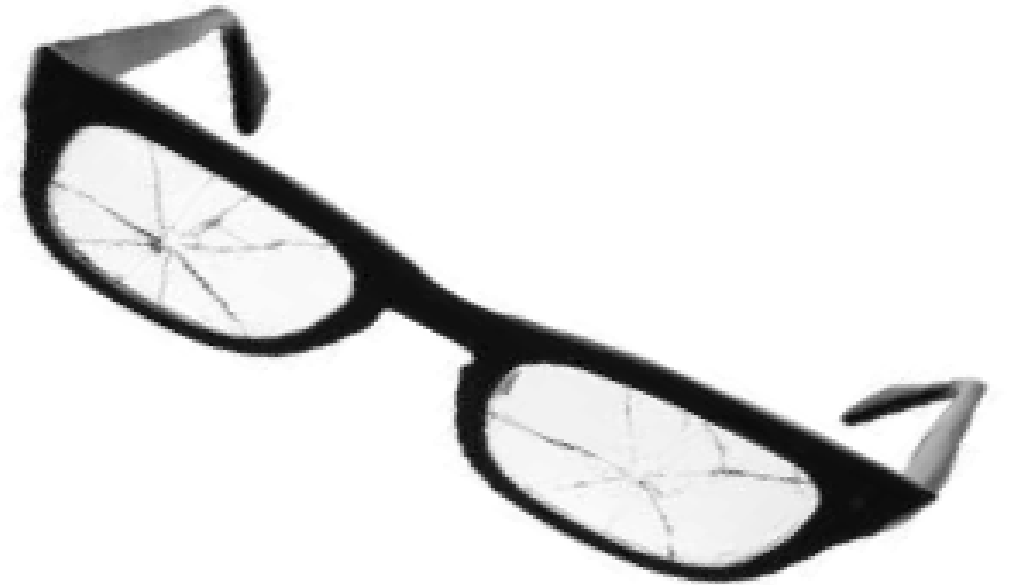
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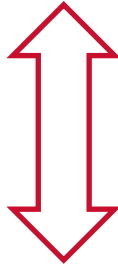
# **Misconceptions on prevention and treatment**



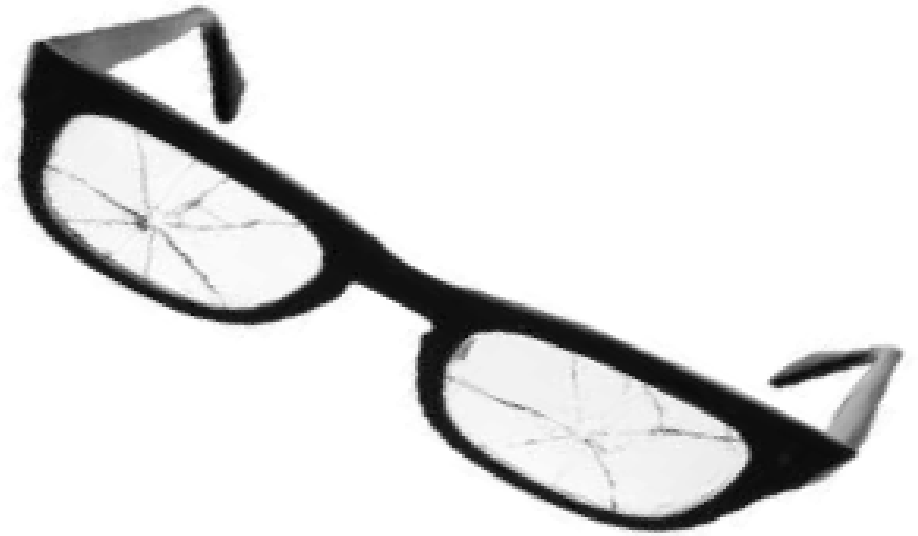
# PREVENTION

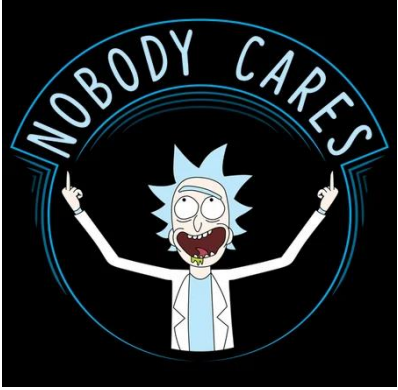


**DIFFERENT THAN TREATMENT**

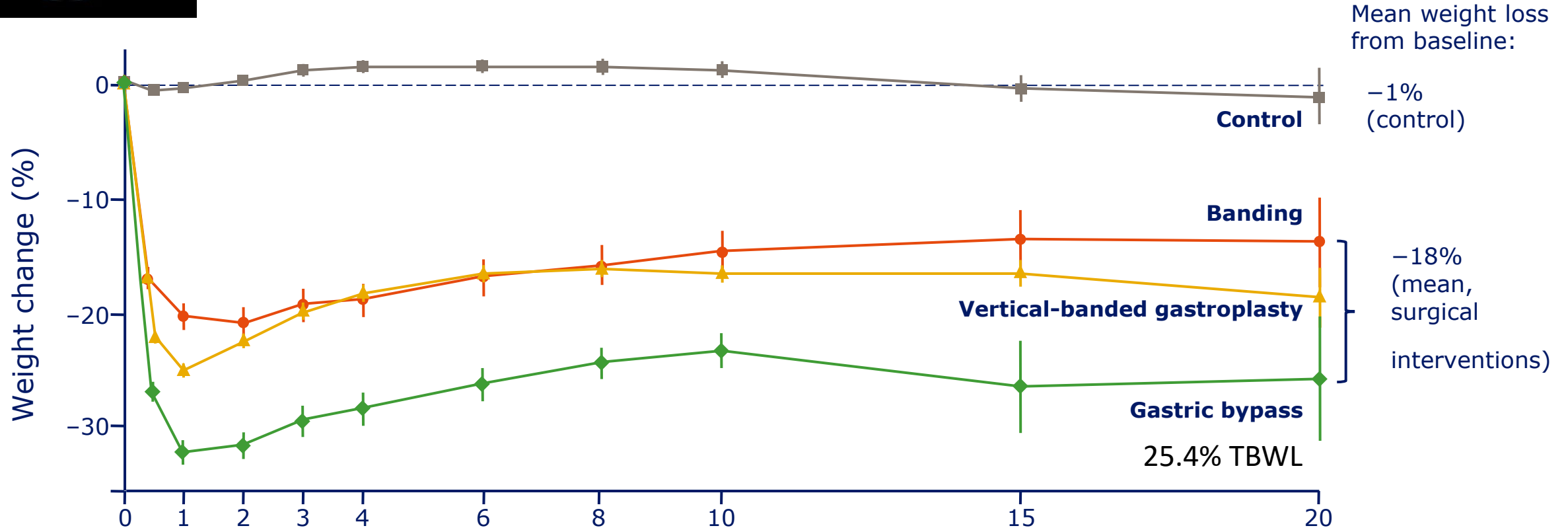


Scientific  
blindness





# Long term WL after bariatric surgery



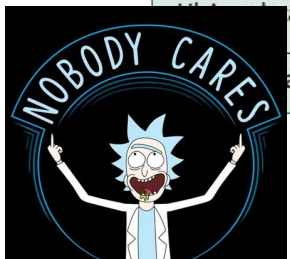
Data are mean  $\pm$ 95% confidence interval

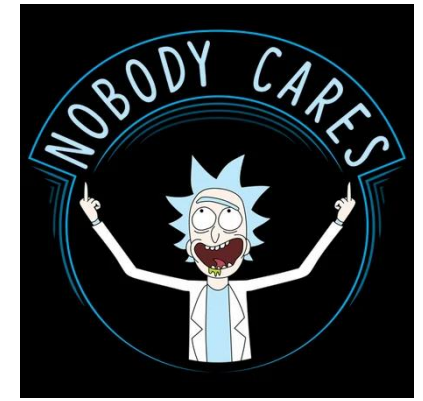
# Glucocentric outcomes RCTs, at least 2 years of follow-up

	Surgical intervention	Follow-up duration, years	Glycaemic target	Proportion reaching glycaemic target (surgical intervention vs current medical treatment), %	Total bodyweight loss (surgical intervention vs current medical treatment), %
Dixon et al <sup>37</sup>	AGB	2	FPG <126 mg/dL and HbA <sub>1c</sub> <6.2% (44.3 mmol/mol), without glucose-lowering agents	73% vs 13%	20% vs 1%
Cohen et al <sup>21</sup>	RYGB	2	HbA <sub>1c</sub> <6.5% (47.5 mmol/mol), regardless of glucose-lowering agents	71% vs 51%	26% vs 5%
Simonson et al <sup>38</sup>	RYGB	3	FPG <126 mg/dL and HbA <sub>1c</sub> <6.5% (47.5 mmol/mol) regardless of glucose-lowering agents	42% vs 0%	25% vs 5%
Ikramuddin et al <sup>39</sup>	RYGB	5	HbA <sub>1c</sub> <7% (53.0 mmol/mol), regardless of glucose-lowering agents	55% vs 14%	22% vs 10%
Courcoulas et al <sup>40</sup>	RYGB vs AGB	5	HbA <sub>1c</sub> <6.5 (47.5 mmol/mol) or FPG <126 mg/dL, without glucose-lowering agents	30% (RYGB) vs 19% (AGB) vs 0%	25% (RYGB) vs 15% (AGB) vs 6%
Wentworth et al <sup>41</sup>	AGB	5	FPG <126 mg/dL and 2 h blood glucose concentration <200 mg/dL (75 g glucose oral challenge test)	23% vs 9%	12% vs 2%
Schauer et al <sup>42</sup>	RYGB vs sleeve gastrectomy	5	HbA <sub>1c</sub> <6% (42.1 mmol/mol), regardless of glucose-lowering agents	29% (RYGB) vs 23% (sleeve gastrectomy) vs 5%	23% (RYGB) vs 19% (sleeve gastrectomy) vs 5%
Mingrone et al <sup>43</sup>	RYGB vs biliopancreatic diversion	10	FPG <100 mg/dL and HbA <sub>1c</sub> <6.5% (47.5 mmol/mol), without glucose-lowering agents	25% (RYGB) vs 50% (biliopancreatic diversion) vs 5%	37% (RYGB) vs 42% (biliopancreatic diversion) vs 7%

Abbreviations: HbA<sub>1c</sub>=glycosylated haemoglobin. FPG=fasting plasma glucose. AGB=adjustable gastric banding. RYGB=Roux-en-Y gastric bypass

Randomised controlled trials with follow-up duration of at least 2 years comparing bariatric surgery with current medical treatment





**95% of PCPs were unaware of the 2022 updated guidelines.**

Hulse J, Slay R et al, *Obes Surg*, 2024

	1991-NIH	2022-IFSO/ASMBS
BMI and co-morbidities	>40 kg/m <sup>2</sup> ; or >35<40 kg/m <sup>2</sup> for individuals with co-morbidities (ie, diabetes, sleep apnoea, hypertension, osteoarthritis, etc)	>30 kg/m <sup>2</sup> with medically uncontrolled diabetes; >35 kg/m <sup>2</sup> individuals without comorbidities when suboptimal response after the best available medical treatment
Age	No data available for adolescents and people older than 70 years	Age limits expanded to include people older than 70 years after evaluation of risks and benefits; and adolescents with BMI >120% of the 95th percentile for their age with related medical problems; or adolescents with BMI >140% of the 95th percentile for their age
Special situations	None	Bridge to joint replacement, correction of abdominal wall hernia, or organ transplantation
Procedures recommended	RYGB, VBG	RYGB, SG

RYGB =Roux-en-Y gastric bypass. SG=sleeve gastrectomy. VBG=vertical banded gastroplasty.

**Table 3: Differences between the 1991 National Institutes of Health Guidelines (NIH)<sup>109</sup> and the 2022 joint International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) and American Society for Metabolic and Bariatric Surgery (ASMBS) guidelines for bariatric surgery<sup>108</sup>**

# Despite typical signs of ongoing (severe) illness - due to Obesity Alone – treatment may not be covered by current insurance policies

“JACK”



BMI 37

## Symptoms:

- Fatigue
- Dyspnea on exertion
- Recurrent bilateral knee pain with reduced mobility

## Medical Assessment:

- Reduced diastolic function
- Restrictive pulmonary defect
- Bilateral Knee pain/stiffness
- **No Diabetes**

## Occupation:

Currently unemployed  
Used to work for a moving company  
but he was no longer able to run his  
job's duties





> [Lancet](#). 2024 Apr 27;403(10437):1613-1615. doi: 10.1016/S0140-6736(23)01963-3.  
Epub 2023 Sep 29.

## Obesity drug shortages are symptomatic of wider malaise

Priya Sumithran <sup>1</sup>, Francis M Finucane <sup>2</sup>, Ricardo V Cohen <sup>3</sup>

**People with T2D have more access to medicines than people with obesity, because of the undefinition of obesity as a disease **BY ITS OWN****

# REFRAMING OBESITY as a DISEASE STATE



Clinical  
Practice

## Disease

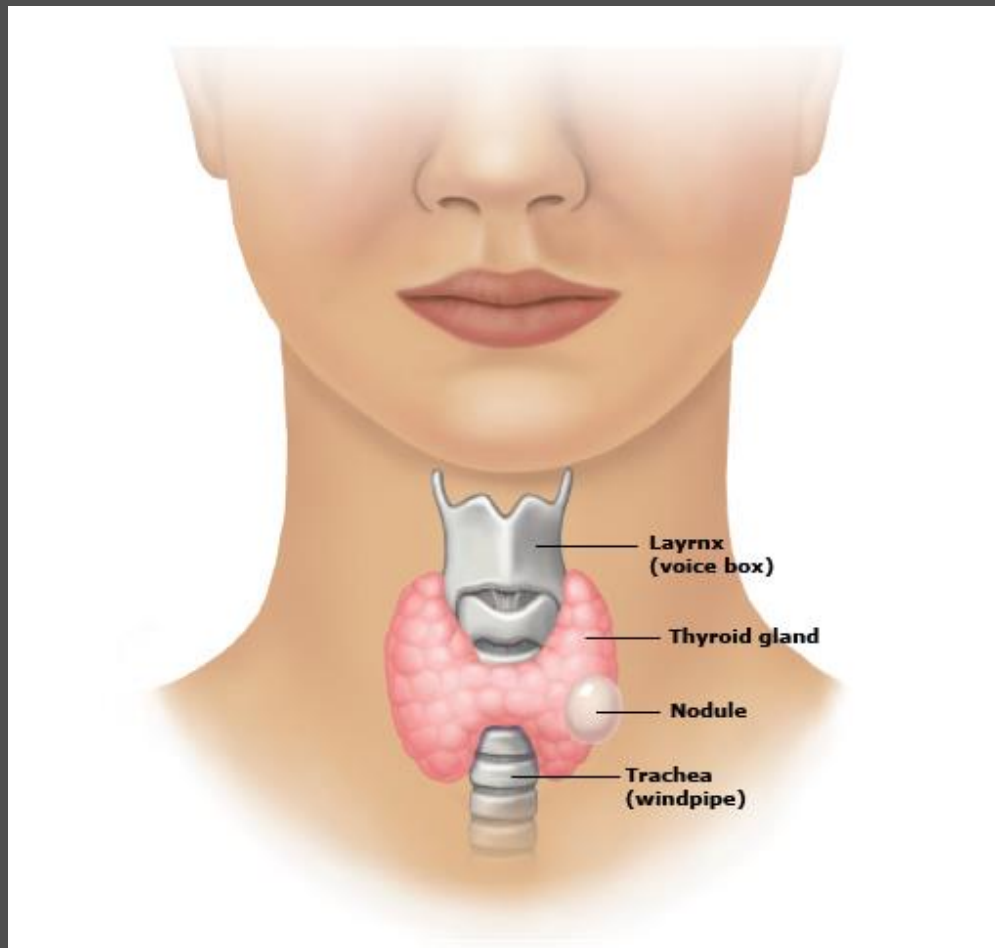
A **harmful deviation from the normal** structural or functional state of an organism, associated with certain **signs and symptoms** And **limitations of daily activities**

Disease =  
Negative impact on  
health at present

## Current Definition of Obesity

“**abnormal or excessive fat accumulation** that presents a **risk to health...**”

“Risk to health” =  
risk may (or may not)  
materialize in the future



# Barrett's Esophagus Progression to Cancer

Using evolutionary theory, Carlo Maley at the Biodesign Institute has shown that cancer progression in Barrett's Esophagus is closely correlated with the genetic diversity of clones in esophageal lesions.

The diagram illustrates the progression of Barrett's Esophagus to cancer based on genetic diversity. It shows a person with a highlighted esophagus, and a close-up of the esophageal lining. The progression is shown in two rows:


- Low Diversity:** The esophageal lining is composed of a few distinct cell types (represented by blue and green blocks). This leads to **No Progression**.
- High Diversity:** The esophageal lining is composed of many different cell types (represented by a wide variety of colored blocks). This leads to **Increased Cancer Risk**, as shown by the presence of irregular, multi-colored cell clusters.

ASU BIODESIGN INSTITUTE  
ARIZONA STATE UNIVERSITY

# Limitations of BMI-Based Definition of Obesity



**No "Obesity"**  
*(Normal Fat Mass)*



This box illustrates a person with a normal fat mass. It features a muscular man wearing boxing gloves, representing a person who is not obese despite having a high BMI.

**Obesity**  
*(Excess Fat Mass)*



**No ongoing illness**                      **Ongoing illness**

This box illustrates obesity (excess fat mass) with two different health outcomes. On the left, a woman is running, labeled "No ongoing illness". On the right, a man is sitting on a bench, labeled "Ongoing illness".



The gradual realization:

***The BMI:  
A great tool for epidemiologists  
but often misleading  
in the  
doctor's office***

The BMI is not an appropriate metric to deny access to obesity treatments

- ✓ *Unigender*
- ✓ *Does not allow evaluation of fitness status*
- ✓ *Discriminates against*
  - ✓ *Older patients*
  - ✓ *Ethnicities*

# BMI **should not** be used :

- ✓ Diagnose clinical obesity
- ✓ Rank the severity of obesity (Class I, II, III),
- ✓ Sole criterion to establish indications for therapeutic interventions
- ✓ Determine coverage for obesity treatments



# Obesity defined as it is

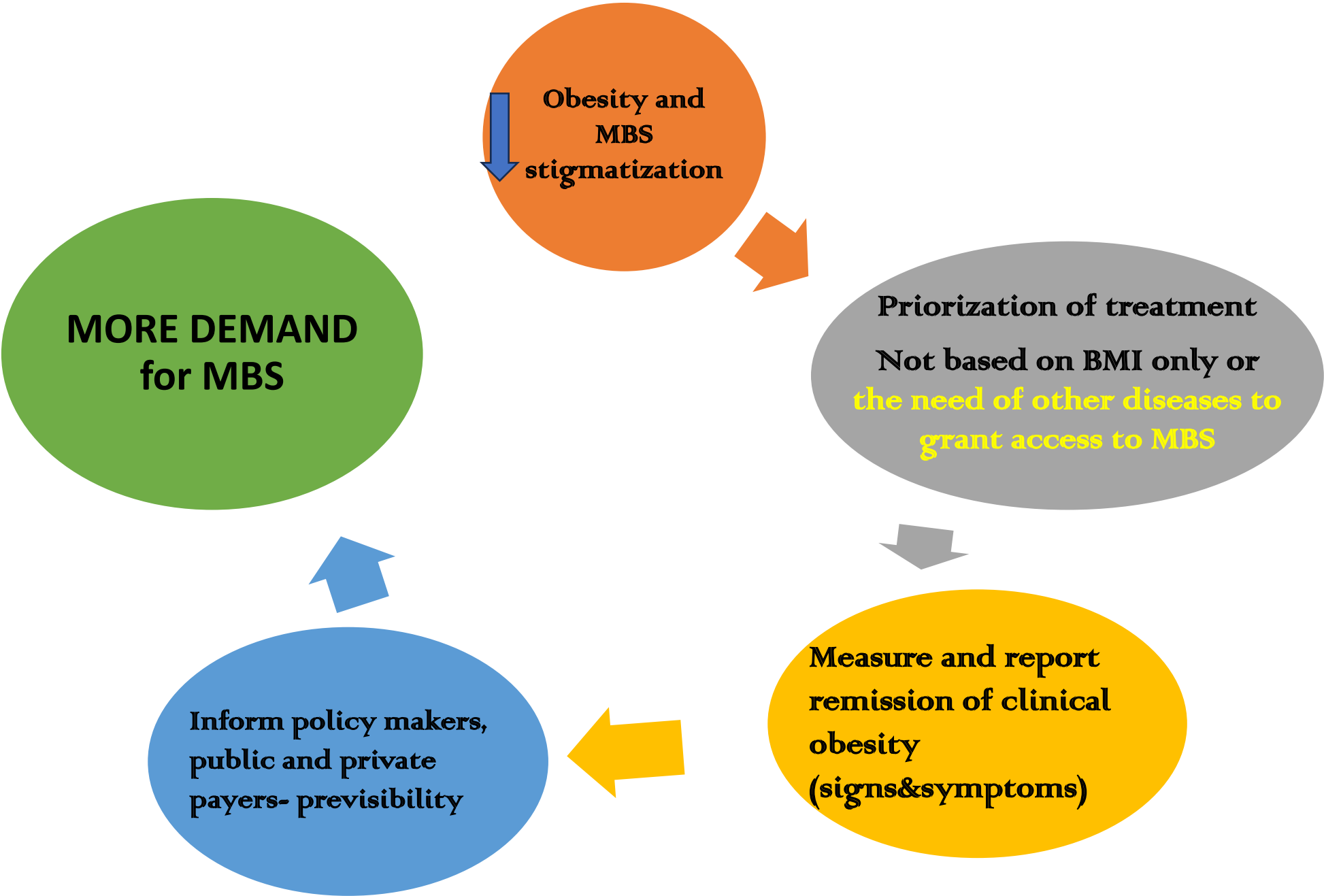


Payers, policy makers  
Public health  
professionals



# Lancet Commission on Clinical Obesity & MBS





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Thank you



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