

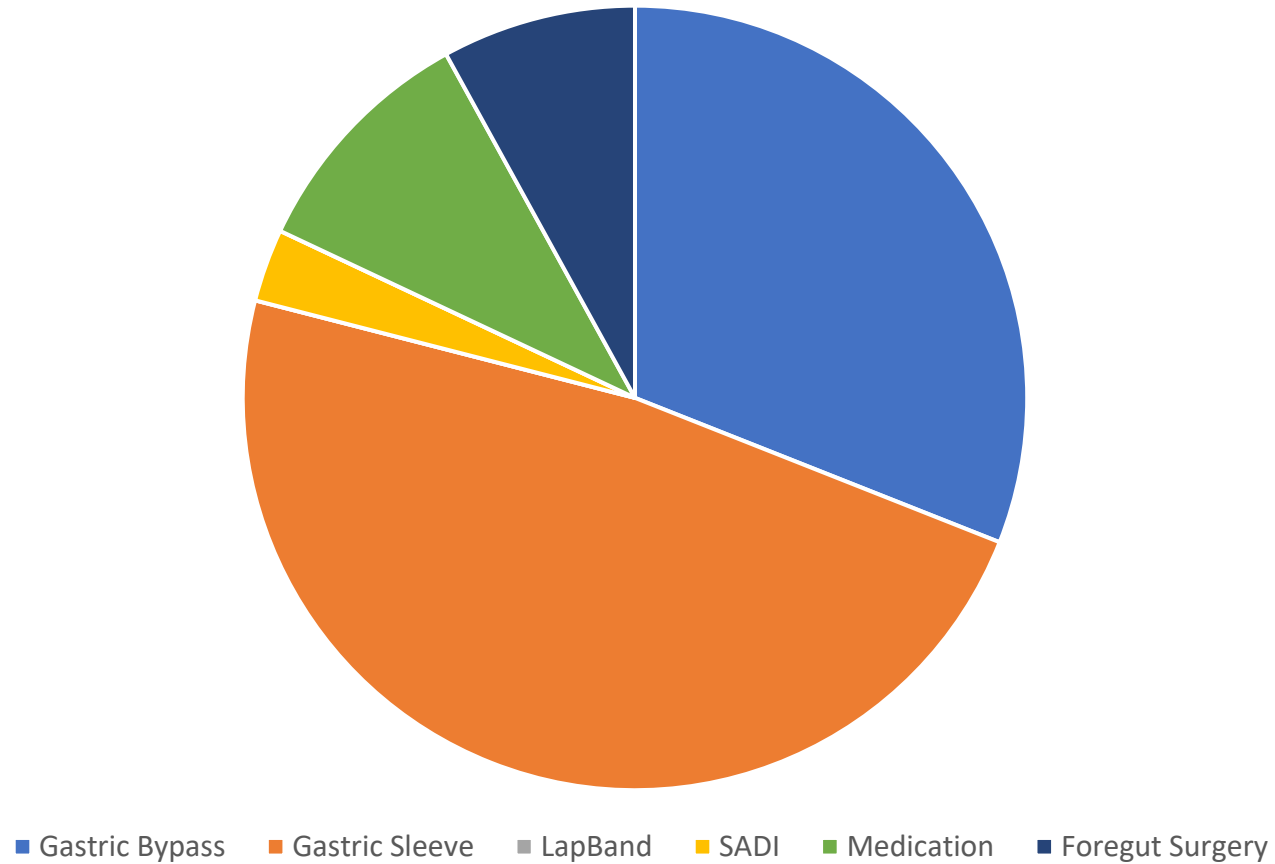
# Freedom of Choice in US Patient Autonomy is Driving Decision-Making

V Lyuksemburg MD; J Mitko MD; F Quinteros MD;  
R Lutfi, MD, FACS, FASMBS, ABOM

# Disclosures:

- Consultant:
  - Medtronic
  - Johnson & Johnson
  - Gore
  - Storz
  - ConMed
- Educational Grant:
  - Gore
- Medical Advisor:
  - Carrum Health

# My Practice Today



# Background:

- Obesity is a chronic disease
- There is no “perfect bariatric surgery”
- Optimal choice for each patient remains controversial

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  - Patient choice
  - Surgeon choice

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    - Word of mouth / Experience of others / Social media
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# Background:

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- Optimal choice for each patient remains controversial
- Decision making:
  - Patient choice
    - Word of mouth / Experience of others / Social media
  - Surgeon choice
    - Data / Technical ability / Technical ease / Reimbursement / Prior experience

# Goal:

- Objectively assess:
  - Patients education prior to consultation
  - Influence of social media on patients choice
  - Influence of healthcare professional on changing patients choice
  - Influence of digitally presented evidence based recommendation on patients choice

# Methods:

- Prospective study 05/2021 – 05/2022
- Inclusion criteria:
  - Adults suffering from obesity
  - Candidates for sleeve gastrectomy and gastric bypass
- Exclusion criteria:
  - BMI >60
  - Prior foregut/bariatric surgery
  - Strong contraindications to certain procedure

# Methods

- Patient completed a survey including:
  - Source of referral
    - MD referral / Word of mouth / Internet
  - Choice of operation prior to consultation
  - Rationale
    - Professional recommendation / Word of mouth / Internet
- Consultation and education were standardized
- Risk of surgery was presented digitally (evidence based), and customized
- Patient choice was obtained again after consultation

# Methods

- Evidence based prediction of outcome was customized
  - ACS risk calculator presented
  - Patient data entered live
  - Outcome:
    - Weight loss
    - Remission of co-morbidities
    - Morbidity & mortality
- Patient choice was obtained again after consultation



# Bariatric Surgical Risk/Benefit Calculator




## Welcome to the MBSAQIP Bariatric Surgical Risk/Benefit Calculator

Last parameter update: May 2022 (v2.0)

With this tool you can enter preoperative information about your patient to provide estimates regarding your patient's risk of postoperative complications, remission of weight-related comorbidities, and weight loss for each of four primary bariatric surgical procedures.

Effective May 26, 2022, the Bariatric Surgical Risk/Benefit Calculator is using updated parameters derived from more current data. This will yield differences in results between the prior and the updated Risk Calculator, though they should be small. While the Bariatric Risk Calculator has been extensively tested, we are always interested in obtaining user feedback on improvements or any found errors. Please report these to: [nsqiptech@facs.org](mailto:nsqiptech@facs.org).

I'm not a robot  reCAPTCHA  
Privacy - Terms

I have read the disclaimer and risk/benefit calculator permitted use statements below.

**Continue**

**Disclaimer:** The MBSAQIP Bariatric Surgical Risk/Benefit Calculator estimates the chance of an unfavorable outcome (such as a complication or death), the chance of remission of weight-related comorbidities, and the patient's BMI, weight change, and percent total weight change after surgery. These quantities are estimated based upon information the patient gives the healthcare provider about prior health history. The estimates are calculated using data from a large number of patients who had a primary bariatric surgical procedure similar to the one the patient may have.

Please note the risk percentages, remission percentages, BMI, weight change, and percent total weight change provided to you by the risk/benefit calculator are only estimates. These estimates only take certain information into account. There may be other factors that are not included in the estimate which may increase or decrease the risk of a complication, the chance of remission of a weight-related comorbidity, or the amount of weight the patient loses. These estimates are not a guarantee of results. A complication after surgery may happen even if the risk is low, a weight-related comorbidity may not go into remission even if the chances are high, and a patient may lose more or less weight than predicted. This information is not intended to replace the advice of a doctor or healthcare provider about the diagnosis, treatment, or potential outcomes. MBSAQIP is not responsible for medical decisions that may be made based on the risk/benefit calculator estimates, since these estimates are provided for informational purposes. Patients should always consult their doctor or other health care provider before deciding on a treatment plan.





## Bariatric Surgical Risk/Benefit Calculator

### Enter Patient and Surgical Information

Please enter as much of the following information as you can to receive the best risk/benefit estimates. A rough estimate will still be generated if you cannot provide all of the information below.

Procedure Types:  Band  Lap Sleeve  Lap Bypass  BPD/DS

BMI Calculation:

Height:  in /  cm

Weight:  lb /  kg

Age:  Sex:  Hispanic Ethnicity:

Race:

ASA Class:

Diabetes:  Functional Status:

- Current Smoker within 1-year
- Sleep Apnea
- History of PE
- Cardiac Risk
- Vascular Risk
- History of Severe COPD
- Hypertension requiring medication
- Hyperlipidemia
- GERD
- Dialysis
- Previous Foregut Surgery
- Steroid Use for Chronic Condition

**Reset All Selections**

**Compute Results**

Results



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Please enter as much of the following information as you can to receive the best risk/benefit estimates. A rough estimate will still be generated if you cannot provide all of the information below.

Procedure Types:  Band  Lap Sleeve  Lap Bypass  BPD/DS

BMI Calculation: 46.59

Height: 65 in / 165 cm

Weight: 280 lb / 127 kg

Age: 50 Sex: Female Hispanic Ethnicity: Unknown

Race: Unknown

ASA Class: I. Healthy Patient

Diabetes: No Functional Status: Independent

- Current Smoker within 1-year
- Sleep Apnea
- History of PE
- Cardiac Risk
- Vascular Risk
- History of Severe COPD
- Hypertension requiring medication
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Procedure Types:  Band  Lap Sleeve  Lap Bypass  BPD/DS

BMI Calculation: 46.59

Height: 65 in / 165 cm

Weight: 280 lb / 127 kg

Age: 50  
Sex: Female  
Hispanic Ethnicity: No

Race: White

ASA Class: II. Mild Systemic Disease

Diabetes: No  
Functional Status: Independent

- Current Smoker within 1-year
- Sleep Apnea
- History of PE
- Cardiac Risk
- Vascular Risk
- History of Severe COPD
- Hypertension requiring medication
- Hyperlipidemia
- GERD
- Dialysis
- Previous Foregut Surgery
- Steroid Use for Chronic Condition

Reset All Selections

Compute Results

Results



Enter Patient and Surgical Information

Results

- 30-day Risk
- 1-year BMI
- 1-year Comorbidity Remission
- Create Report**

Select Procedure Types:

- Band
- Lap Sleeve
- Lap Bypass
- BPD/DS

Select one or more Charts:

- 30-day Risk
- 30-day Risk (Enlarged)
- 1-year BMI
- 1-year Weight Change
- 1-year Percent Total Weight Change
- 1-year Comorbidity Remission
- 1-year Comorbidity Remission (Enlarged)

Report Name (Optional):

Ms. Gina Smith

**Create Report**

Disclaimer:

The information contained in this report is privileged patient health information, and may be subject to protection under the law, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The ACS is not responsible for ensuring that this information is transmitted or stored in a secure environment.

Choose one or more delivery methods:

Email to

Display as PDF (report can be saved and/or printed)

This process may take a few seconds to complete. Thanks for your patience.

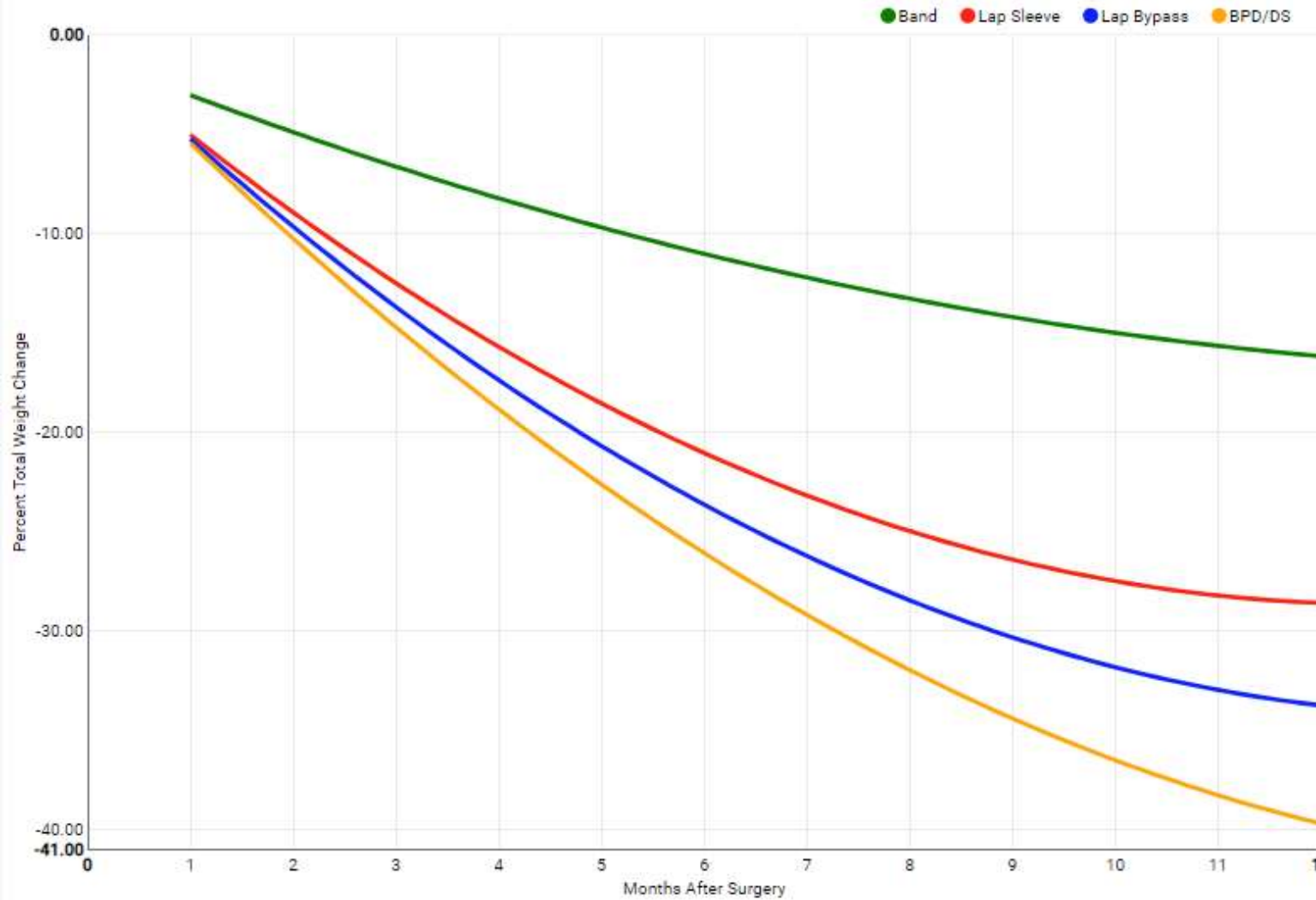
**Deliver Report**



Enter Patient and Surgical Information

Results

30-day Risk | **1-year BMI** | 1-year Comorbidity Remission | Create Report



Risk Factors: 46.59 (BMI), 50.00 (Age), Female, No (Hispanic Ethnicity), Mild Systemic Disease

View:  BMI  Weight Change  Percent Total Weight Change

## 1-year Comorbidity Remission

Report Name: Ms. Gina Smith

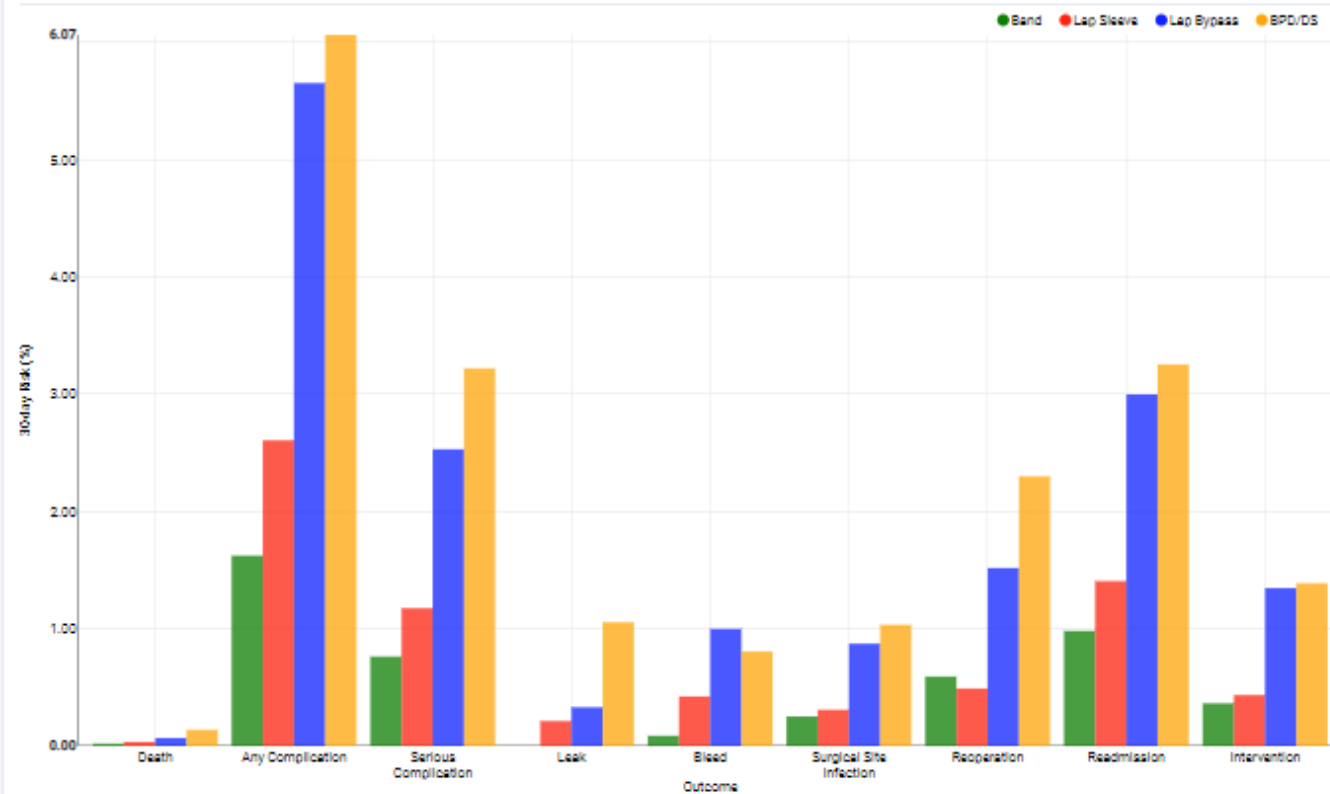
Risk Factors: 46.59 (BMI), 50.00 (Age), Female, No (Hispanic Ethnicity), Mild Systemic Disease

Patient reported no weight related comorbidity.

## 30-day Risk (Enlarged)

Report Name: Ms. Gina Smith

Risk Factors: 46.59 (BMI), 50.00 (Age), Female, No (Hispanic Ethnicity), Mild Systemic Disease



Procedure	Death	Any Complication	Serious Complication	Leak	Bleed	Surgical Site Infection	Reoperation	Readmission	Intervention
Band	0.02%	1.62%	0.76%	N/A	0.09%	0.25%	0.59%	0.99%	0.36%
Lap Sleeve	0.03%	2.61%	1.19%	0.21%	0.42%	0.31%	0.49%	1.41%	0.43%
Lap Bypass	0.07%	5.66%	2.53%	0.33%	1.00%	0.87%	1.52%	3.00%	1.35%
BPO/DS	0.14%	6.07%	3.22%	1.06%	0.81%	1.03%	2.30%	3.26%	1.39%



## Bariatric Surgical Risk/Benefit Calculator

### Enter Patient and Surgical Information

Please enter as much of the following information as you can to receive the best risk/benefit estimates. A rough estimate will still be generated if you cannot provide all of the information below.

Procedure Types:  Band  Lap Sleeve  Lap Bypass  BPD/DS

BMI Calculation: 46.59

Height: 65 in / 165 cm

Weight: 280 lb / 127 kg

Age: 50 Sex: Female Hispanic Ethnicity: Unknown

Race: White

ASA Class: III. Severe Systemic Disease

Diabetes: Insulin Functional Status: Independent

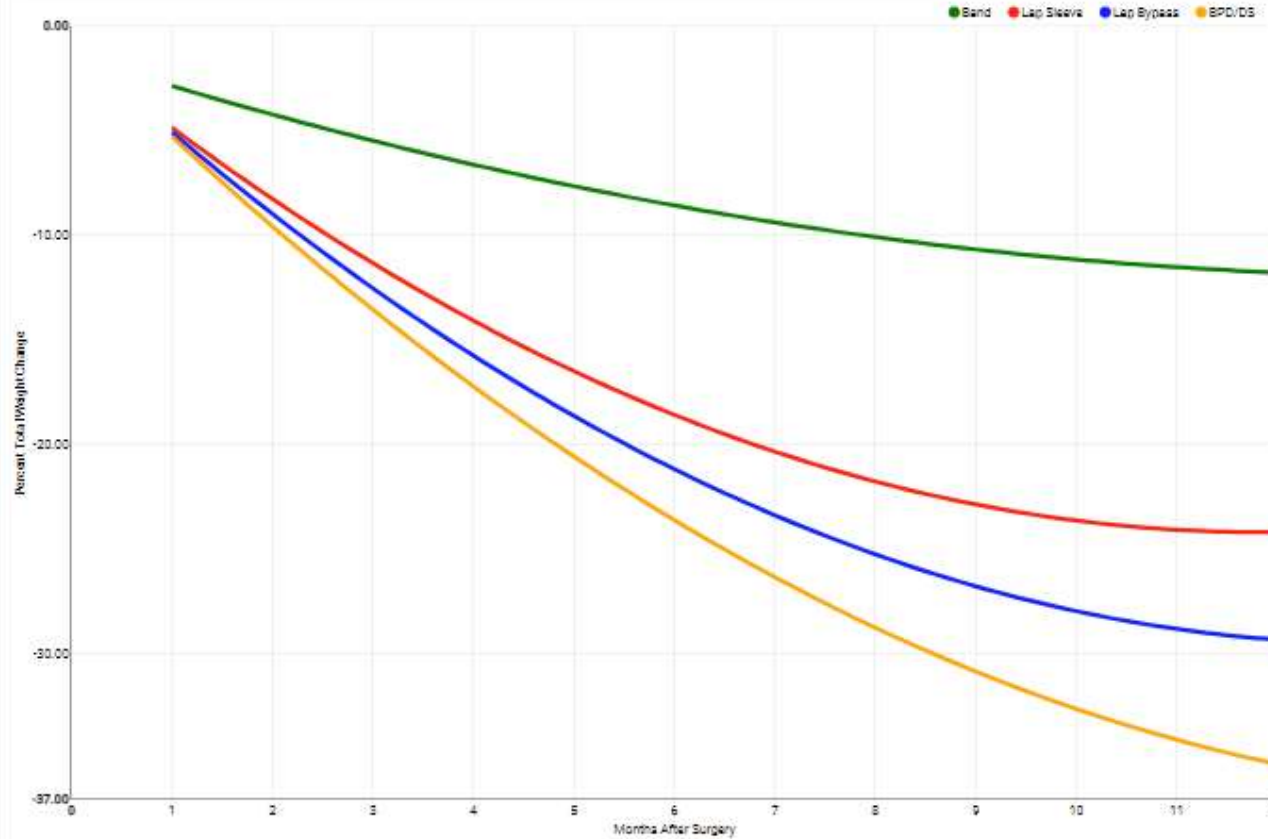
- Current Smoker within 1-year
- Sleep Apnea
- History of PE
- Cardiac Risk
- Vascular Risk
- History of Severe COPD
- Hypertension requiring medication
- Hyperlipidemia
- GERD
- Dialysis
- Previous Foregut Surgery
- Steroid Use for Chronic Condition

Results

## 1-year Percent Total Weight Change

Report Name: Ms. Christine Star

Risk Factors: 46.59 (BMI), 50.00 (Age), Female, Unknown (Hispanic Ethnicity), Severe Systemic Disease, Insulin, HTN, Sleep Apnea, Hyperlipidemia, Cardiac

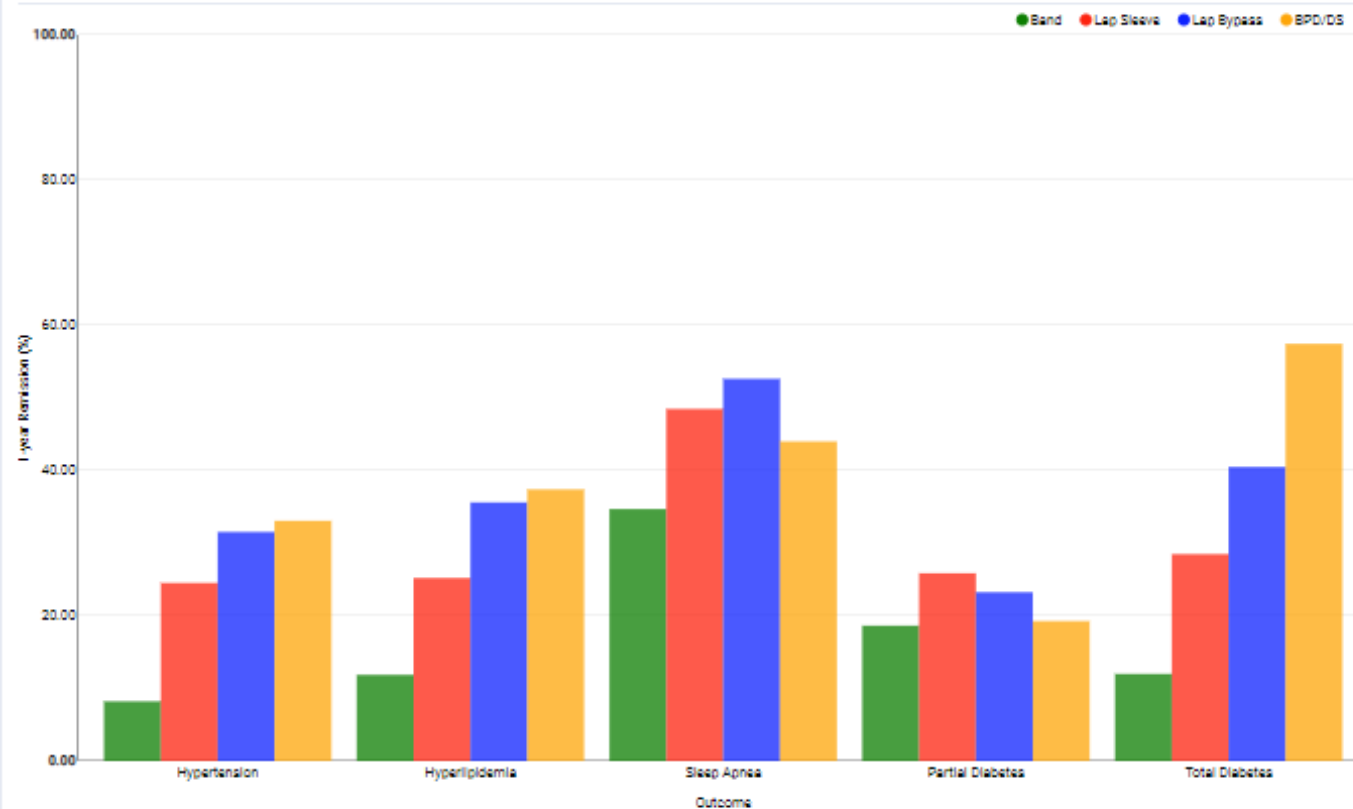


Procedure	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Band	-2.85%	-4.22%	-5.47%	-6.61%	-7.65%	-8.57%	-9.38%	-10.08%	-10.67%	-11.15%	-11.52%	-11.78%
Lap Sleeve	-4.95%	-8.25%	-11.33%	-14.06%	-16.50%	-18.59%	-20.34%	-21.77%	-22.87%	-23.64%	-24.08%	-24.19%
Lap Bypass	-5.07%	-8.97%	-12.53%	-15.75%	-18.64%	-21.18%	-23.39%	-25.26%	-26.79%	-27.98%	-28.83%	-29.34%
BPD/DS	-5.27%	-9.57%	-13.55%	-17.22%	-20.58%	-23.62%	-26.35%	-28.76%	-30.86%	-32.65%	-34.13%	-35.29%

## 1-year Comorbidity Remission

Report Name: Ms. Christine Star

Risk Factors: 46.59 (BMI), 50.00 (Age), Female, Unknown (Hispanic Ethnicity), Severe Systemic Disease, Insulin, HTN, Sleep Apnea, Hyperlipidemia, Cardiac

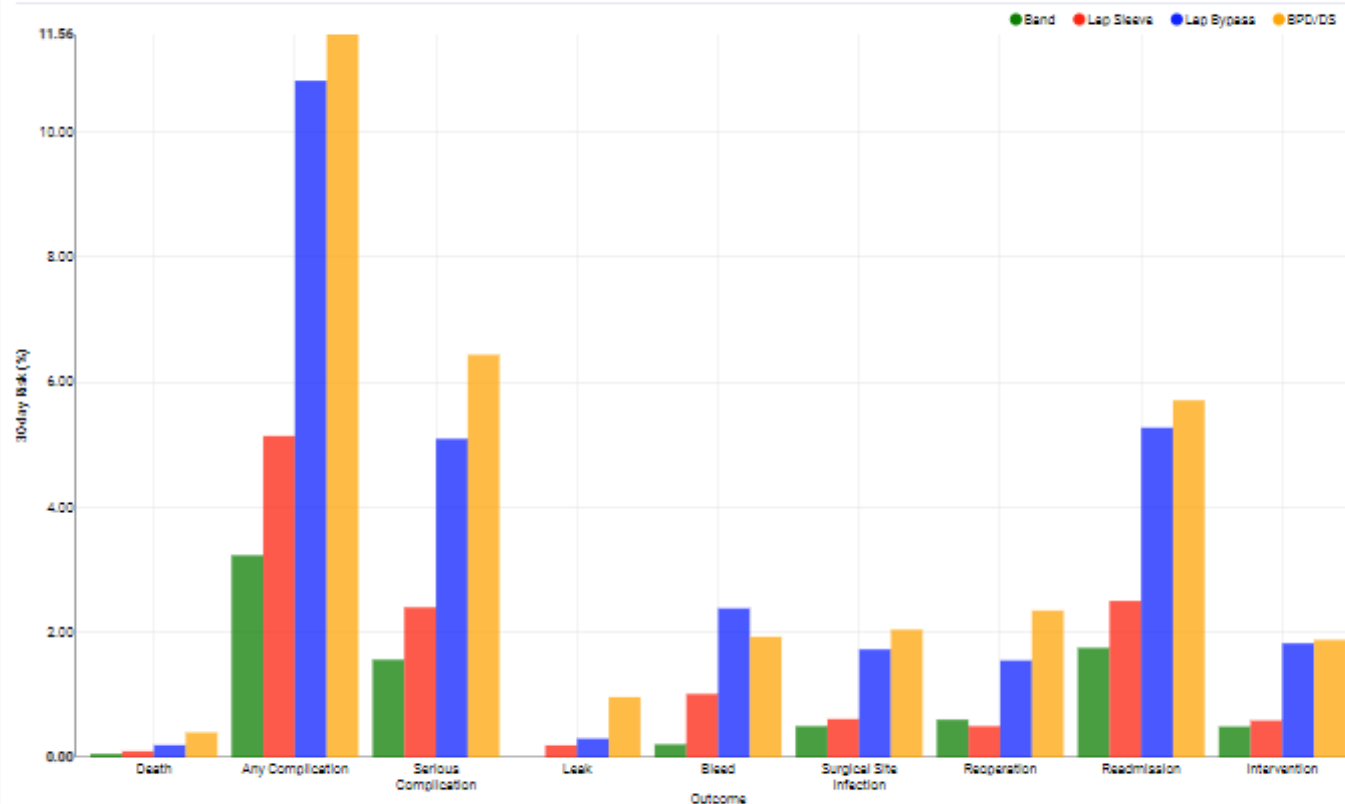


Procedure	Hypertension	Hyperlipidemia	Sleep Apnea	Partial Diabetes	Total Diabetes
Band	8.22%	11.87%	34.71%	18.64%	12.00%
Lap Sleeve	24.53%	25.21%	48.49%	25.87%	28.50%
Lap Bypass	31.55%	35.61%	52.64%	23.25%	40.49%
BPD/DS	33.06%	37.41%	44.01%	19.27%	57.46%

## 30-day Risk (Enlarged)

Report Name: Ms. Christine Star

Risk Factors: 46.59 (BMI), 50.00 (Age), Female, Unknown (Hispanic Ethnicity), Severe Systemic Disease, Insulin, HTN, Sleep Apnea, Hyperlipidemia, Cardiac



Procedure	Death	Any Complication	Serious Complication	Leak	Bleed	Surgical Site Infection	Reoperation	Readmission	Intervention
Band	0.06%	3.23%	1.56%	N/A	0.21%	0.50%	0.61%	1.75%	0.49%
Lap Sleeve	0.10%	5.14%	2.40%	0.19%	1.02%	0.62%	0.50%	2.50%	0.59%
Lap Bypass	0.20%	10.82%	5.09%	0.30%	2.38%	1.73%	1.55%	5.27%	1.83%
BPD/DS	0.40%	11.56%	6.44%	0.97%	1.93%	2.04%	2.35%	5.71%	1.88%

# Methods

- For patients with type 2 diabetes:
  - Cleveland Clinic calculator was presented on a tablet
  - Patients demographics were entered (live)
  - Recommendation were read to patients
- Choice of patient after calculator recommendation was recorded

## Individualized Metabolic Surgery Score

### Risk Factors

Preop Number of Diabetes Medications

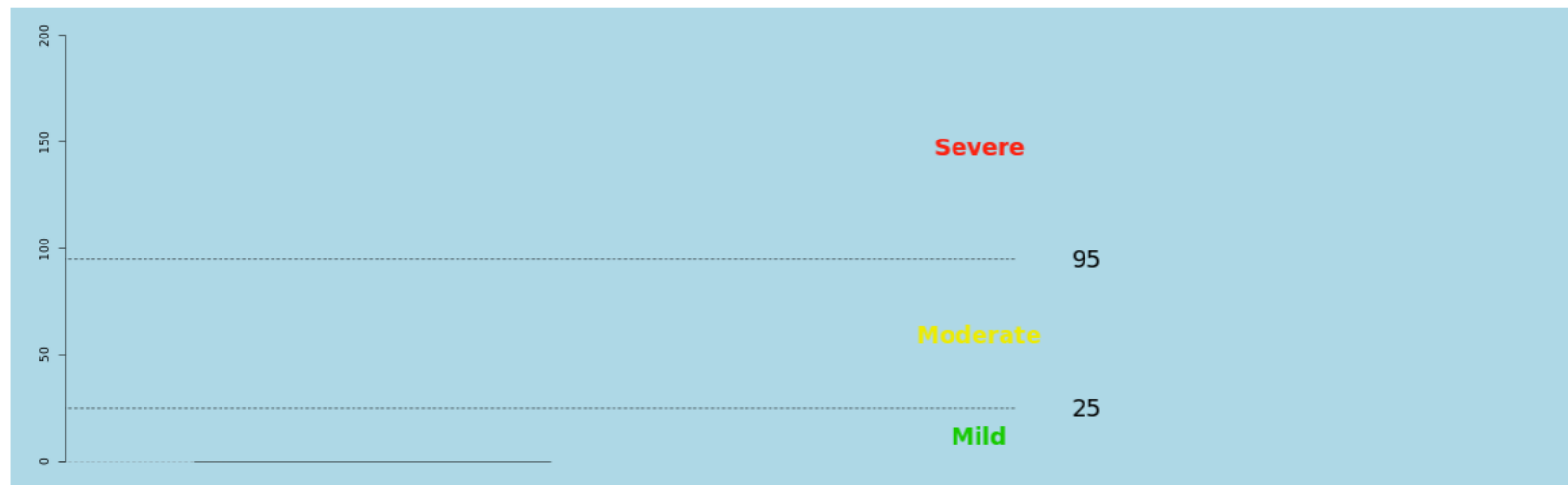
Preop Insulin Use

Preop Duration of Diabetes (years)

Preop Glycemic Control (A1c < 7%)

*Individualized Metabolic Surgery Score* categorizes patients with type 2 diabetes into three validated stages for evidence-based bariatric procedure selection (Roux-en-Y gastric bypass [RYGB] vs. sleeve gastrectomy [SG]).

Total Points: 0



Recommendation in Average Risk Patients:

Click Below for Calculator and Author Contact Information

[1] Ali Aminian et al. *Individualized Metabolic Surgery Score: Procedure Selection Based on Diabetes Severity*. Ann Surg. 2017 Jul 24. doi: 10.1097/SLA.0000000000002407

### Disclaimer

No Medical Advice. ALTHOUGH SOME CONTENT MAY BE PROVIDED BY INDIVIDUALS IN THE MEDICAL PROFESSION, YOU ACKNOWLEDGE THAT PROVISION OF SUCH CONTENT DOES NOT CREATE A MEDICAL PROFESSIONAL-PATIENT RELATIONSHIP AND DOES NOT CONSTITUTE AN OPINION, MEDICAL ADVICE, PROFESSIONAL DIAGNOSIS, SERVICE OR TREATMENT OF ANY CONDITION. Access to general information is provided for educational purposes only, through this site and links to other sites. Content is not recommended or endorsed by any doctor or healthcare provider. The information and Content provided are not substitutes for medical or professional care, and you should not use the information in place of a visit, call, consultation or the advice of your physician or other healthcare provider. You are liable or responsible for any advice, course of treatment, diagnosis or any other information, services or product obtained through this site.

# Individualized Metabolic Surgery Score

## Risk Factors

Preop Number of Diabetes Medications

Preop Insulin Use

Preop Duration of Diabetes (years)

Preop Glycemic Control (A1c < 7%)

*Individualized Metabolic Surgery Score* categorizes patients with type 2 diabetes into three validated stages for evidence-based bariatric procedure selection (Roux-en-Y gastric bypass [RYGB] vs. sleeve gastrectomy [SG]).

# Individualized Metabolic Surgery Score

## Risk Factors

**Preop Number of Diabetes Medications**

**Preop Insulin Use**

**Preop Duration of Diabetes (years)**

**Preop Glycemic Control (A1c < 7%)**

*Individualized Metabolic Surgery Score* categorizes patients with type 2 diabetes into three validated stages for evidence-based bariatric procedure selection (Roux-en-Y gastric bypass [RYGB] vs. sleeve gastrectomy [SG]).

# Individualized Metabolic Surgery Score

## Risk Factors

Preop Number of Diabetes Medications

2

Preop Insulin Use

Yes

Preop Duration of Diabetes (years)

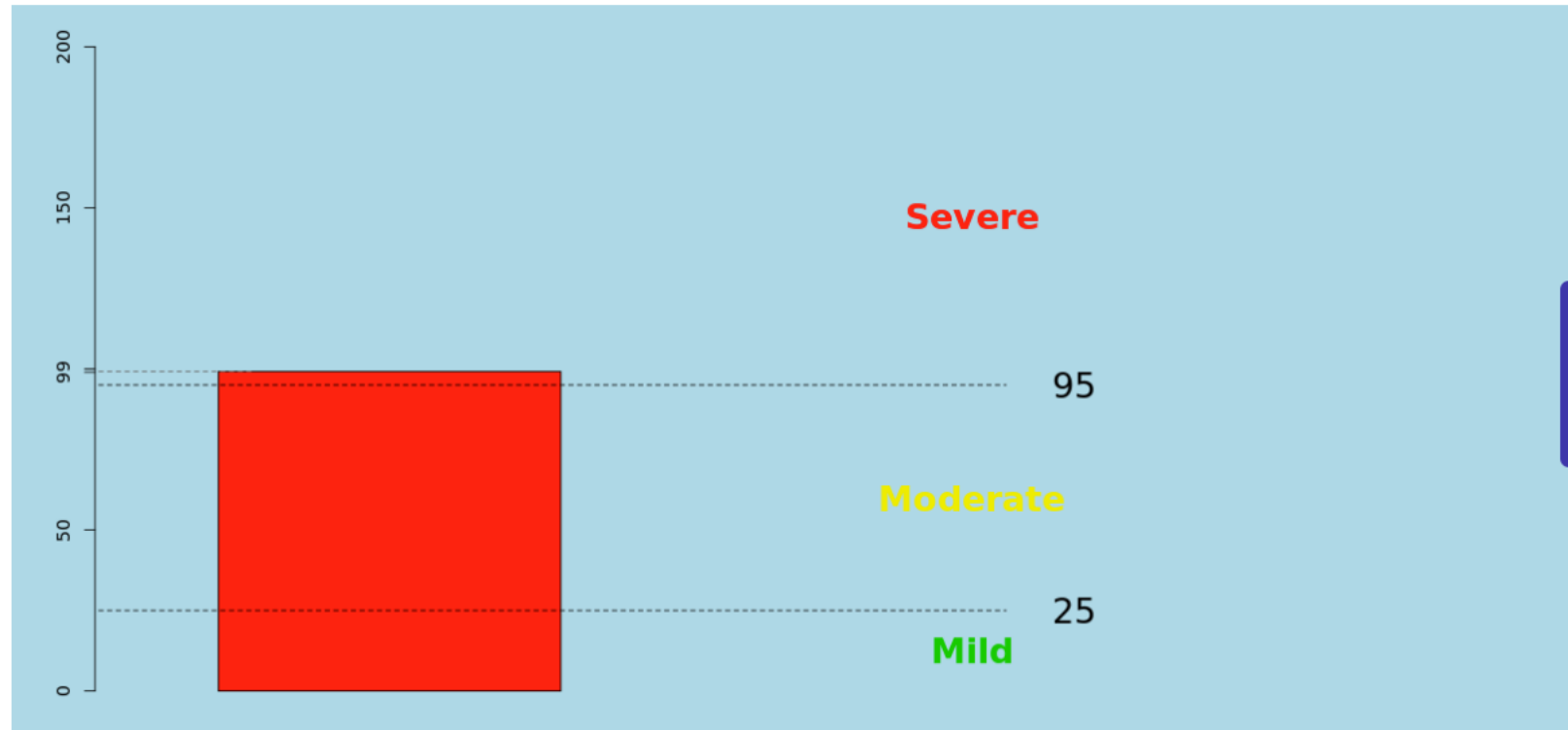
14

Preop Glycemic Control (A1c < 7%)

Yes

*Individualized Metabolic Surgery Score* categorizes patients with type 2 diabetes into three validated stages for evidence-based bariatric procedure selection (Roux-en-Y gastric bypass [RYGB] vs. sleeve gastrectomy [SG]).

Total Points: 99.2

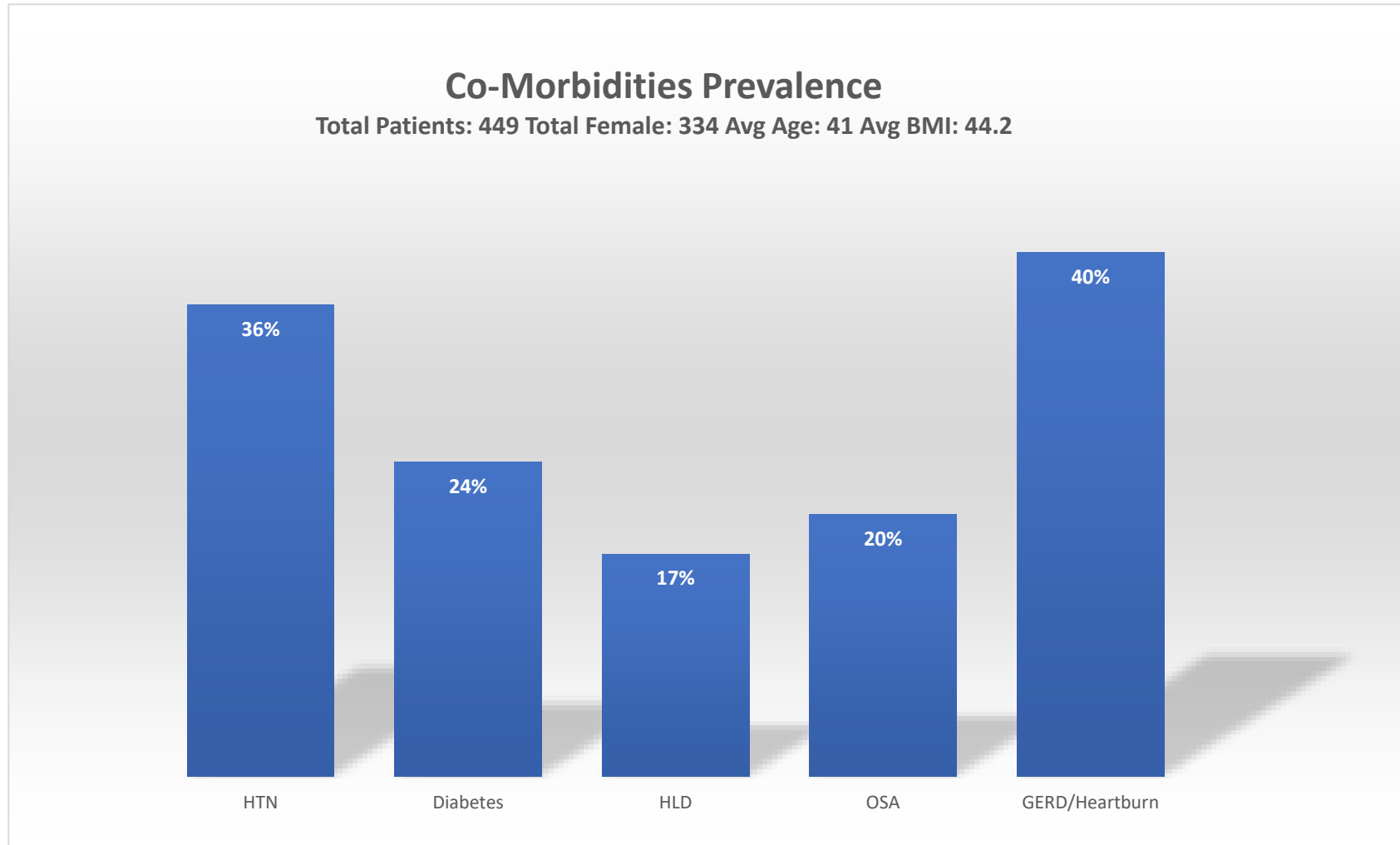


Recommendation in Average Risk Patients:

→ Sleeve gastrectomy is suggested.

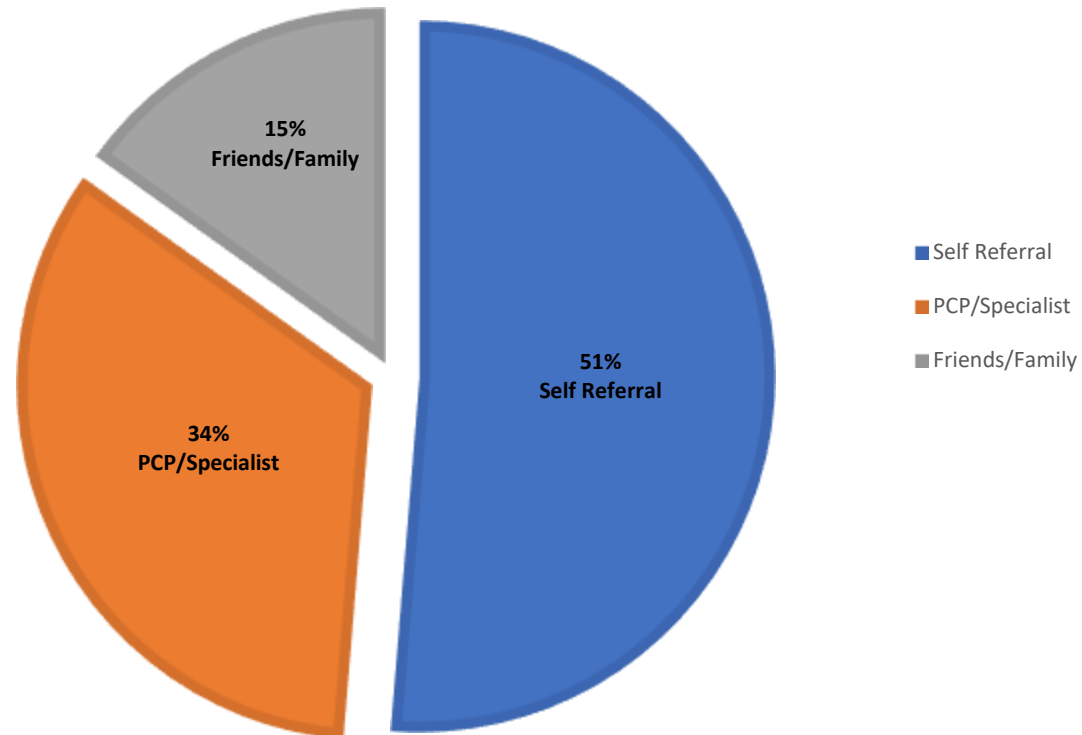
Long-term remission of type 2 diabetes for those with a severe disease is about 10% after both RYGB and SG. Given the similar long-term postoperative outcomes in glucose control and diabetic medications, SG (which is a less risky procedure) is suggested for surgical management in those with severe diabetes, if there is no other reason to favor RYGB. Notably, both procedures result in significant improvements in glucose control and number of diabetic medications compared to baseline values.

# Demographics



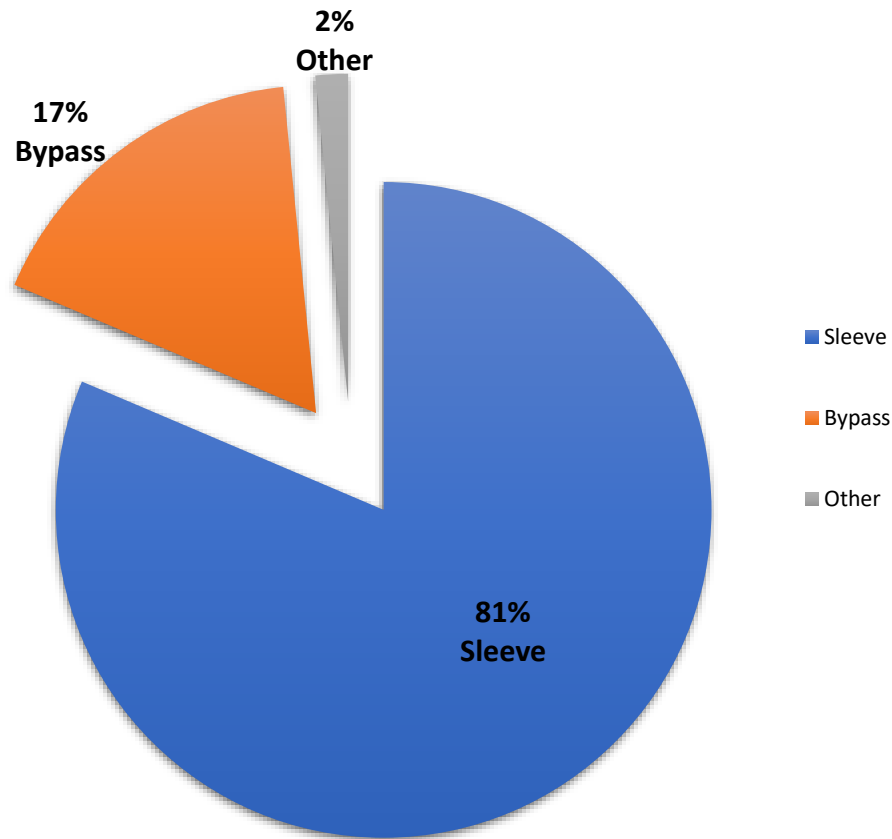
# Demographics

REFERRAL SOURCES



# Results

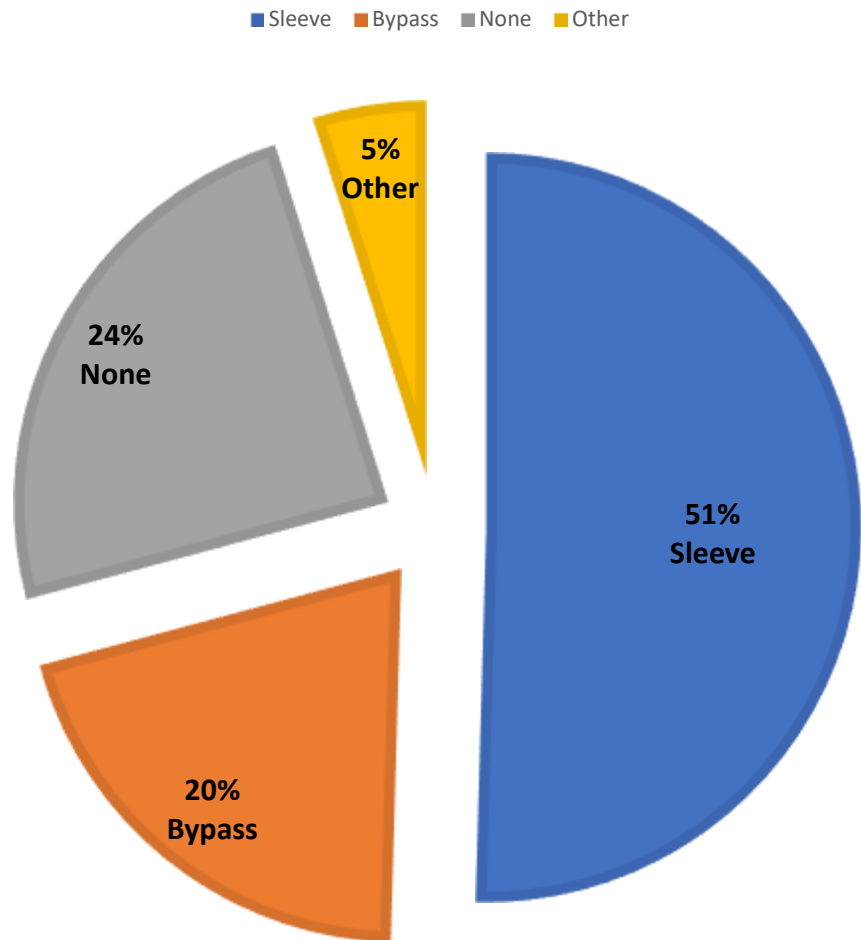
## Initial Procedure Choice



- Most patients (73.7%) had a predetermined choice of surgery prior to their initial consultation.
- Of those patients, a large majority initially chose the sleeve gastrectomy (81%).
- Patient's information was obtained from social media (66.5%), followed by friend/family recommendations (29.7%)

# Results

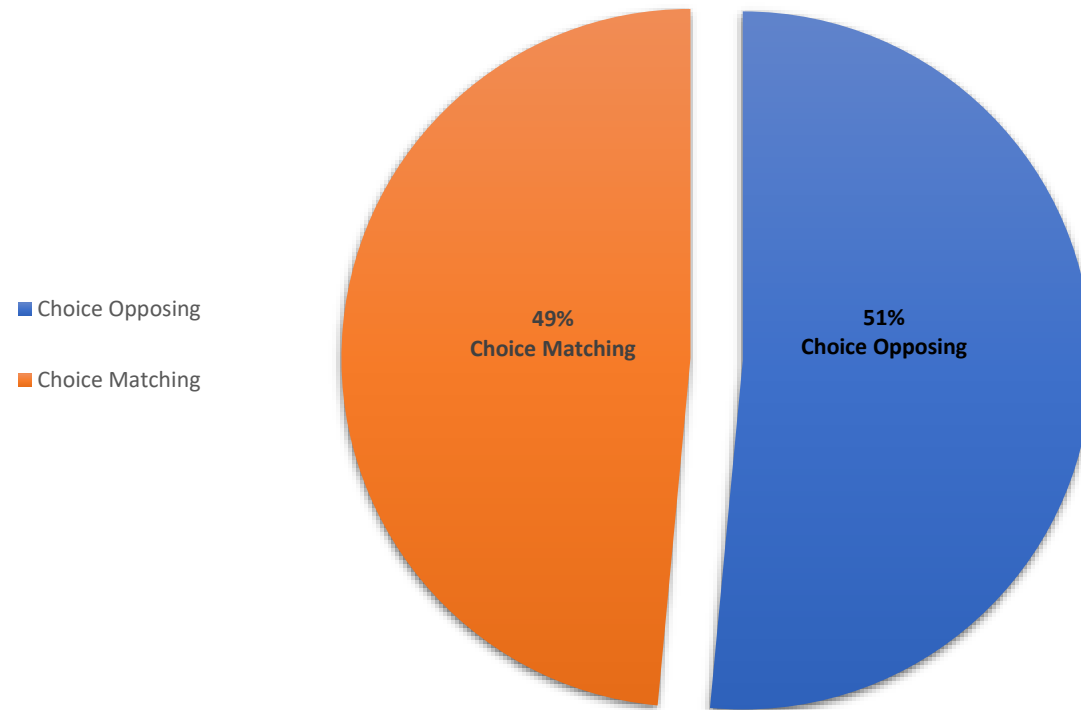
DIABETICS INITIAL PROCEDURE CHOICE



- Patients with diabetes initially expressed their procedure choice prior to consultation
- Patients were then shown the Individualized Metabolic Surgery Score Calculator procedure recommendation

# Results

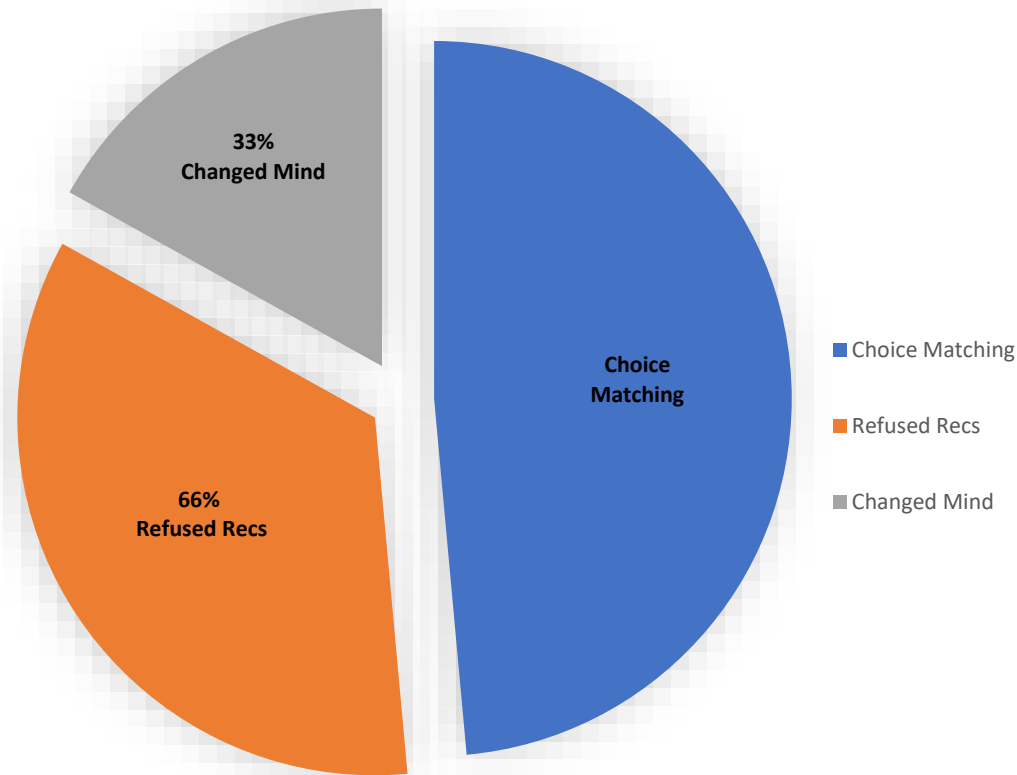
Diabetic Choice of Surgery vs Calculator Recommendation



- The calculator recommended the opposite choice for more than half of all diabetic patients (51%)

# Results

## Diabetics with "Wrong" Choice and Compliance with Evidence Based Calculator Recommendations



- 66% of patients with diabetes did not change their choice of procedure despite the calculator recommendations
- Of the patients who complied, 72% switched to a gastric bypass

# Conclusion

- Patients with severe obesity are largely referred from internet searches and have strong predetermined choices.
- They tend to stick to their decisions despite surgeon guidance otherwise
- Evidence-based tools predicting healthcare outcomes are largely ineffective in optimizing decisions

# References

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For those with Diabetes:

Does it really and practically matter??



# Wi-Fi or Clinics, Do We Still Matter?

Melissa Pastoressa MD, John Mitko MD, Diana Kantarovich MD, Ahmad Alsheekh MD, Eric Veilleux MD, Emma Wood RD, Suzanne Hamby PA-C, Andres Giovannetti MD, Francisco Quinteros MD, Rami Lutfi MD  
Chicago Institute of Advanced Surgery, Chicago, IL

## Introduction

While there are clear indications for bariatric surgery, there is no consensus on the perfect operation for each patient based on comorbidities, advantages and disadvantages of each procedure, and patient preference. The goal of this study was to objectively measure the influence of internet searches, surgeon recommendation, and evidence-based digital tools on a patient's surgical choice.

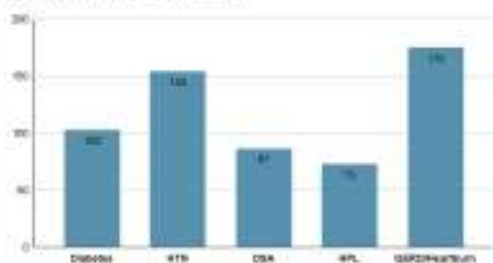
## Methods

All candidates for gastric sleeve (GS) and gastric bypass (GB) completed questionnaires about referral source, choice of surgery and rationale. Patients were educated in standardized fashion about the mechanism of action, risks, and benefits of each operation. Diabetics were then presented with an evidence-based calculator predicting individual remission rates with GS versus GB. We recorded patients' original choice, change in heart after consultation and after calculator for diabetics.

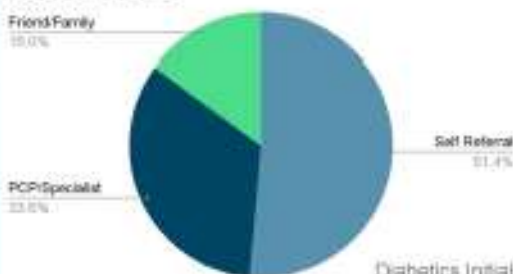
## Demographics

Total patients: 429 Total female: 334 Avg Age: 41 Avg BMI: 44.2

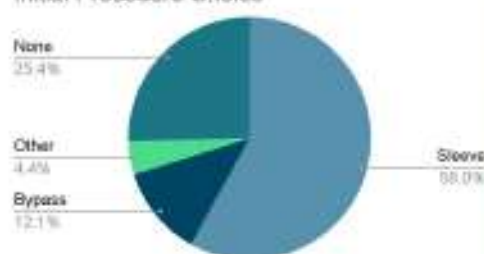
### Comorbidities Prevalence



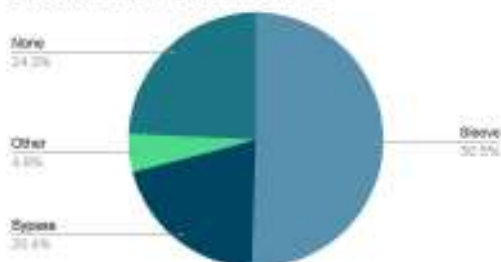
## Referral Patterns



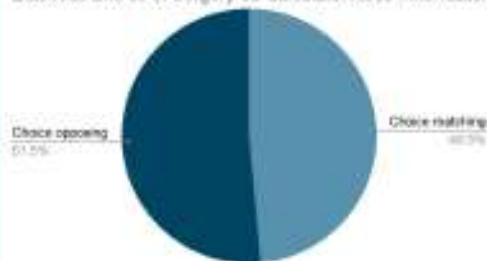
## Initial Procedure Choice



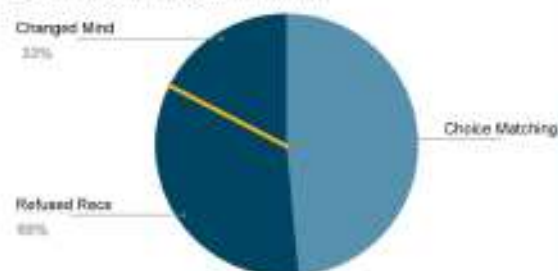
## Diabetics Initial Procedure Choice



## Diabetics Choice of Surgery Vs Calculator Recommendation



## Diabetics With "Wrong" Choice and Compliance with Evidence Based Calculator Recommendations

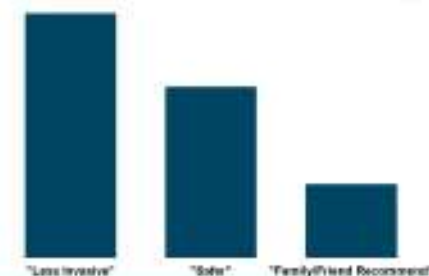


## Results

Referral sources were mostly internet searches (51.4%), 33.6% primary-care, 15% word-of-mouth. Most patients (73.7%) had predetermined decisions and majority chose sleeve gastrectomy (58%). Most patients obtained information from social media (66.5%), followed by friend/relative recommendation (29.7%). After consultation, only 44 of the total 429 patients (10.3%) changed their minds, 26 changed to GS due to its "simplicity," 18 changed to GB, mostly due to GERD symptoms. The majority of patients chose SG after consultation (87%).

Though the calculator recommended the opposite choice for more than half of diabetics (51.5%), most (66%) refused to revise their choice despite clearly presented evidence-based recommendations. Of those who complied with calculator, 72% switched to GB.

## Most Common Reasons Sleeves Preferred Over Bypass



## Conclusions

Patients with severe obesity are largely self-referred from internet searches with strongly predetermined choices. They tend to stick to their decisions despite surgeons' guidance otherwise. Furthermore, evidence-based tools predicting healthcare outcomes are largely ineffective in optimizing decisions.

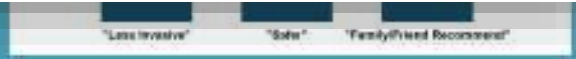
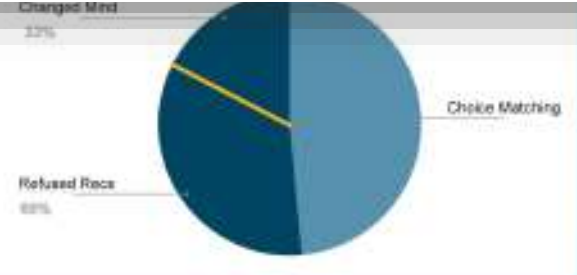
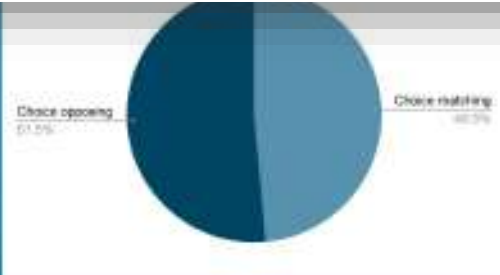
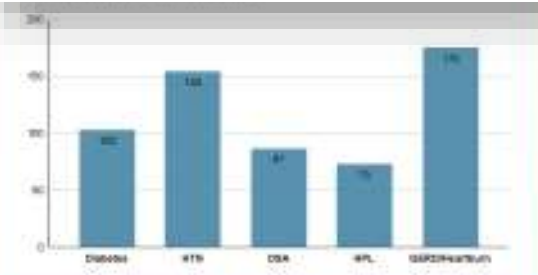
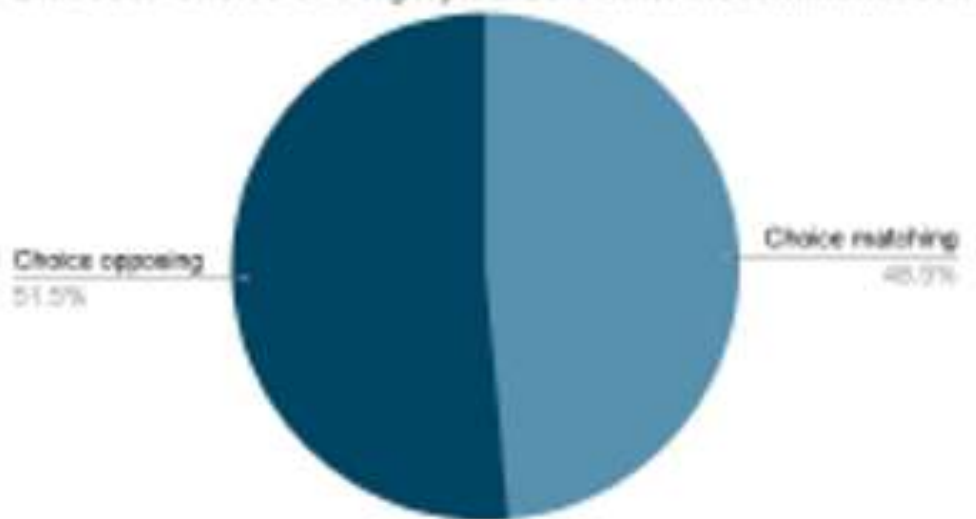




# Wi-Fi or Clinics, Do We Still Matter?

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## Diabetics Choice of Surgery Vs Calculator Recommendation



### Conclusions

Patients with severe obesity are largely self-referred from Internet searches with strongly predetermined choices. They tend to stick to their decisions despite surgeons' guidance otherwise. Furthermore, evidence-based tools predicting healthcare outcomes are largely ineffective in optimizing decisions.