

# XXVIII IFSO World Congress

9-12 September 2025 | Santiago, Chile



## MANAGEMENT OF CONCOMITANT VENTRAL HERNIAS IN PATIENTS UNDERGOING METABOLIC BARIATRIC SURGERY

Brian Jacob, MD FACS  
NYC  
IFSO 2025

# IFSO 2025 Santiago

Combined Therapies, The Dawn of a New Era

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# Disclosure Slide



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INTERNATIONAL  
HERNIA COLLABORATION

International Hernia Collaboration, Inc

- Founder and shareholder

Medtronic / Telebio

- Consultant

Hernia at the same time  
as bariatrics: Debate  
continues depending on  
your belief

Brian Jacob IFSO 2025

## Belief

Life is like this, Sometimes we think it  
won't work, but it does.

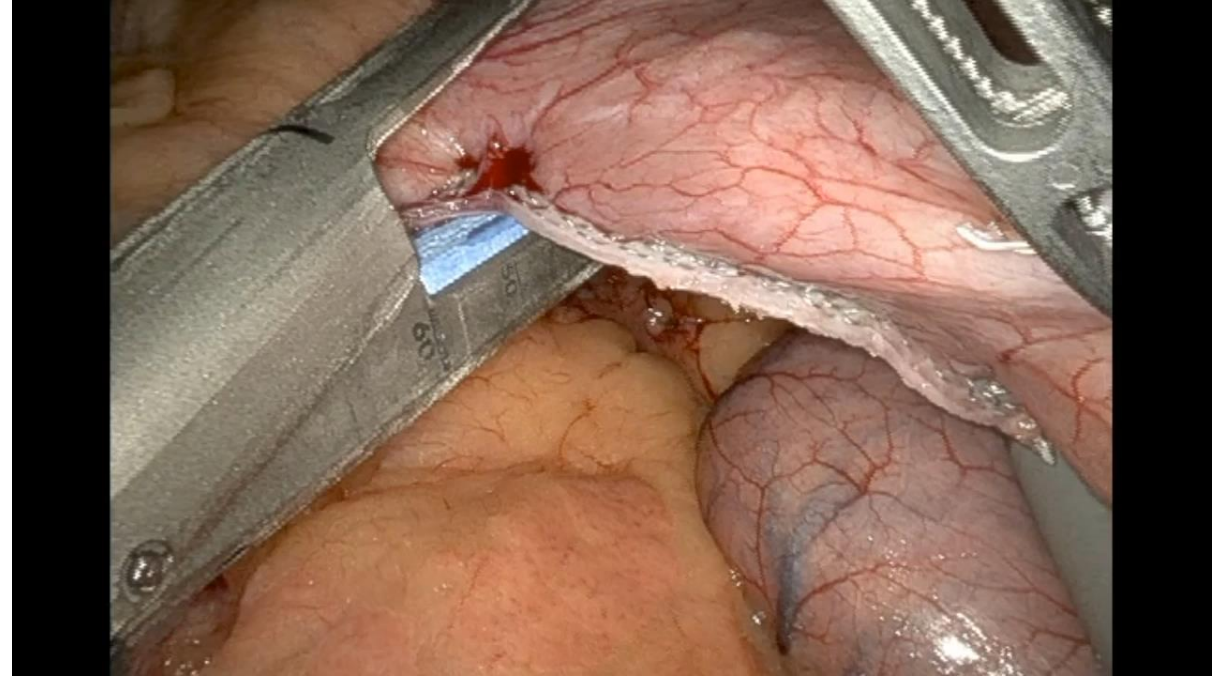


# Ventral Hernia during Obesity Surgery- Incidence

Synchronous or concomitant ventral hernia repair is performed in approximately 1–4% of bariatric surgery cases

ACS-NSQIP database found an incidence of **2.9%** among patients undergoing Roux-en-Y gastric bypass or sleeve gastrectomy

MBSAQIP database study reported a lower incidence of **1.1%** for concurrent ventral hernia repair during bariatric surgery



1. [Synchronous Ventral Hernia Repair in Patients Undergoing Bariatric Surgery](#). Spaniolas K, Kasten KR, Mozer AB, et al. Obesity Surgery. 2015;25(10):1864-8.
2. [Concurrent Ventral Hernia Repair in Patients Undergoing Laparoscopic bariatric Surgery: A Case-Matched Study Using the National Surgical Quality Improvement Program Database](#). Khorgami Z, Haskins IN, Aminian A, et al. Surgery for Obesity and Related Diseases : Official Journal of the American Society for Bariatric Surgery. 2017
3. [Concurrent Laparoscopic Ventral Hernia Repair With Bariatric Surgery: A Propensity-Matched Analysis](#). Moolla M, Dang J, Modasi A, et al. Journal of Gastrointestinal Surgery : Official Journal of the Society for Surgery of the Alimentary Tract. 2020.



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# Ventral Hernia at same time as Bariatric Surgery: Why?

## Risks of Not Repairing

- Bowel obstruction / incarceration. 1–3% within 30 days
- **Reoperation risk** : Overall, **15.8%** of bariatric patients required an abdominal reoperation within two years, and about one-third of these were urgent; the presence of a ventral or umbilical hernia and its repair is a major risk factor for reoperation

## Risks of Concomitant Repair

- Infection
- Longer operative time, LOS, post op complications.

## Potential Benefits of Concomitant Repair

- Single anesthesia and hospitalization.
- Prevents obstruction/strangulation
- **Improved recurrence profile** when mesh is used, compared to primary closure.

Elnahas AI, Reid JN, Lam M, Doumouras AG, Anvari M, Schlachta CM, Alkhamesi NA, Hawel J, Urbach DR. Risk factors for abdominal reoperations in bariatric patients. Surg Obes Relat Dis. **2022**





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# 2017 - concomitant ventral hernia and outcomes

- 27,608 patients underwent laparoscopic bariatric surgery
  - 988 (3.6%) patients underwent concomitant ventral hernia repair.
- 30-day patient morbidity
  - concomitant **ventral hernia** were **significantly more likely to experience** :
  - **composite adverse events** ( $P = .01$ ),
    - a higher rate of unplanned **return to the operating room** ( $P < .001$ ),
    - and a higher **30-day readmission rate** ( $P = .01$ ).

Khorgami Z, Haskins IN, Aminian A, Andalib A, Rosen MJ, Brethauer SA, Schauer PR. Concurrent ventral hernia repair in patients undergoing laparoscopic bariatric surgery: a case-matched study using the National Surgical Quality Improvement Program Database. Surg Obes Relat Dis. **2017** Jun;13(6):997-1002.

# Concomitant Ventral Hernia Repair and Bariatric Surgery: a Systematic Review

Andrea Lazzati <sup>1 2</sup>, Georges Bou Nassif <sup>3</sup>, Luca Paolino <sup>3</sup>

Ventral hernias were treated by simple suture (n = 191), synthetic mesh (n = 186), and biological mesh (n = 72).

Recurrence rate was **25.7% in the suture group**, 14.3% in the biomesh group, and **1.1% in the synthetic mesh group** (p < 0.05).

## Conclusions:

- **synthetic mesh** used at the time of bariatric surgery resulted in a **dramatically lower recurrence rate** (only **1.1%**) compared to suture-only (25.7%) or biologic mesh (14.3%), **without increasing 30-day wound complications or reoperations**
- **Concomitant treatment of small hernia defect is feasible and safe during bariatric surgery.**



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# 2019: Is concomitant bariatric surgery with laparoscopic ventral hernia mesh repair the best approach?

- 156 patients of underwent concomitant bariatric surgery with IPOM
- retrospective evaluation , minimum follow-up of 12 months
  - 120 patients (body mass index :  $43.64 \pm 6.8$ ) underwent sleeve gastrectomy
  - 36 patients (body mass index:  $42.49 \pm 8.57$ ) underwent Roux-en-Y gastric bypass
  - no postoperative mesh infections and only 1 patient had recurrence.
- **Conclusion:** Bariatric surgery with IPOM provides the patient with a 1-stage treatment for both obesity and ventral hernia along with reduced risk of recurrence as a result of weight loss. It is safe to do a combined procedure in high volume centers with adequate expertise.



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Praveen Raj P, Bhattacharya S, Saravana Kumar S, Parthasarathi R, Cumar B, Palanivelu C. Morbid obesity with ventral hernia: is concomitant bariatric surgery with laparoscopic ventral hernia mesh repair the best approach? An experience of over 150 cases. Surg Obes Relat Dis. 2019

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# 2020 - concomitant ventral hernia and outcomes

- 430,225 patients were included
  - Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) database
- 4690 (1.1%) patients underwent concomitant ventral hernia repair.
  - 30-day patient morbidity for VHR group
    - higher major complication rate (5.8 vs 3.8%,  $p < 0.001$ )
    - no significant difference in mortality (0.3 vs 0.2%,  $p = 0.531$ )
    - Both LSG with VHR (3.2 vs 2.4%,  $p = 0.007$ ) and **RYGB** with VHR (**9.3** vs 5.7%,  $p < 0.001$ )
- **Bariatric surgeons should consider these risks when choosing to perform VHR at the time of bariatric surgery.**

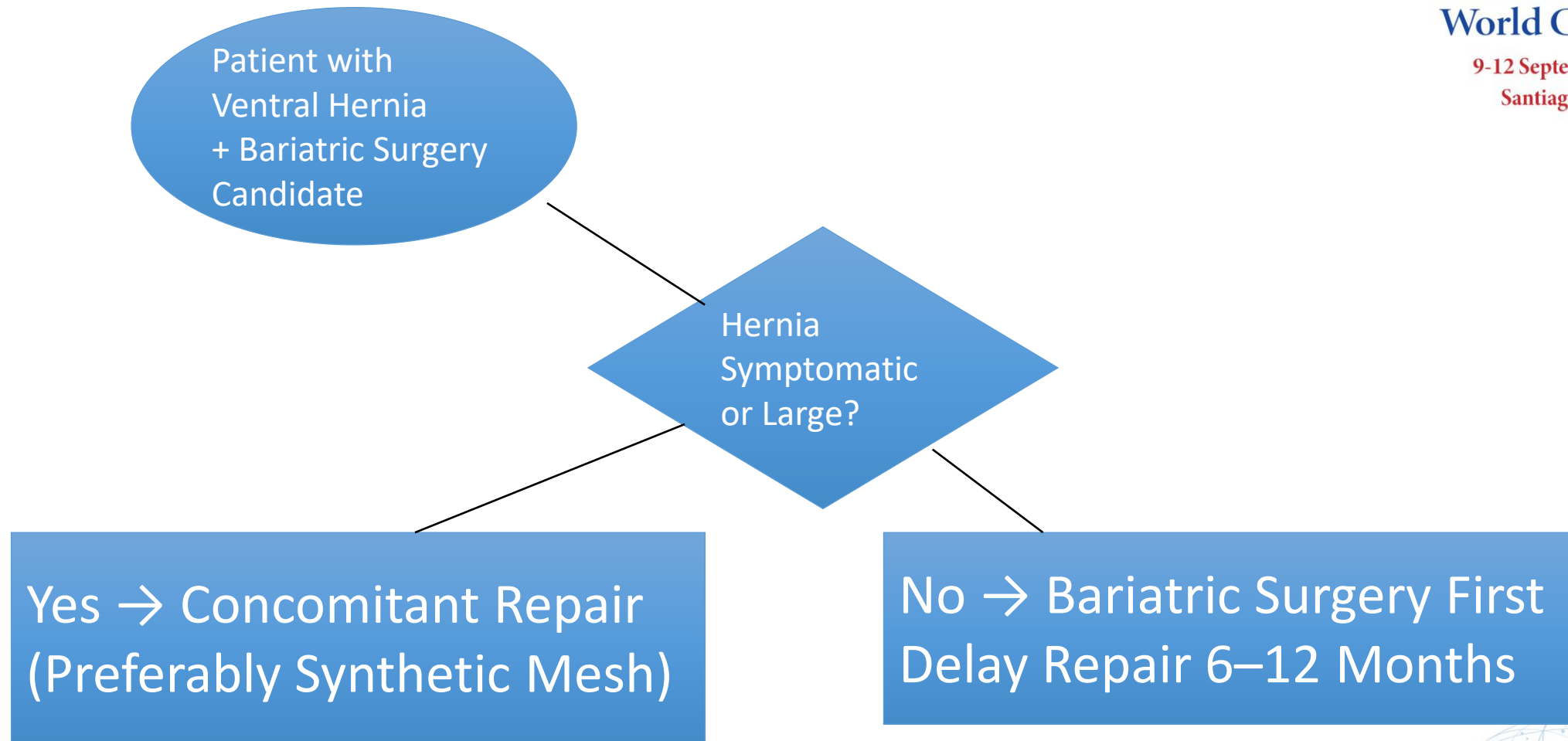
Moolla M, Dang J, Modasi A, Byrns S, Switzer N, Birch DW, Karmali S.  
Concurrent Laparoscopic Ventral Hernia Repair with Bariatric Surgery: a  
Propensity-Matched Analysis. J Gastrointest Surg. **2020**

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## Decision Tree:

# Management of Concomitant Ventral Hernias in Bariatric Surgery



Lazzati et al., *Obes Surg*, 2018

Restrepo-Rodas et al., *ALES*, 2024

## Hernia repair in the bariatric patient: a systematic review and meta-analysis

- The concomitant approach was associated with decreased odds of experiencing surgical site infections, reoperation, and seromas.
- The staged approach (BS-first) was associated with decreased odds of mesh infection.
- The single-arm studies suggest a lower incidence of hernia recurrence in a staged BS-first approach than in a concomitant approach.
- **Conclusions:** The data suggest a concomitant approach is appropriate for hernias that the surgeon feels do not require mesh, while the staged (BS-first) approach is more appropriate if the hernia requires mesh placement.

# Hernia repair in the bariatric patient: a systematic review and meta-analysis



Systematic Review



Bariatric Surgery (BS) first  
vs. hernia repair (HR) first  
vs. concomitant approach



27 of 1584 studies

This meta-analysis aims to  
determine which surgical  
approach is best for bariatric  
patients with hernias.

## Staged vs. concomitant approach:

- ↓ Mesh infection 30 days (OR .34, CI .18–.64)
- ≡ Hernia recurrence (OR 1.43, CI .83–2.45)
- ≡ Bowel obstruction (OR 3.97, CI .37–42.25)
- ≡ Postoperative leak (OR 1.63, CI .74–3.62)
- ↑ SSI 30 days (OR 1.47, CI 1.16–1.86)
- ↑ Reoperation 30 days (OR 2.34, CI 1.48–3.70)
- ↓ Mortality (OR .20, CI .07–.57)

## BS first vs. concomitant approach:

- ↓ Mesh infection 30 days (OR .45, CI .23–.88)
- ≡ Hernia recurrence (OR .78, CI .21–2.91)
- ≡ Bowel obstruction (OR 3.97, CI .37–42.25)
- ↑ SSI 30 days (OR 1.67, CI 1.32–2.12)
- ↑ Reoperation 30 days (OR 3.08, CI 2.48–3.83)
- ↓ Mortality (OR .13, CI .03–.54)

A concomitant approach is appropriate for hernias that the surgeon feels do not require mesh, while the **staged (BS-first) approach is more appropriate if the hernia requires mesh placement.**



# Hernia Repair Recommendations: Obesity

- preoperative weight optimization—through lifestyle modification, pharmacotherapy, or bariatric surgery—is commonly recommended in clinical practice.
- However, the strength of evidence supporting this approach is variable, leading to an evidence gap.



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2025, May:

## Preoperative weight loss for open abdominal wall reconstruction: study protocol for a randomized controlled trial

Daphne Remulla<sup>1</sup>, Kimberly S Miles<sup>2</sup>, Alvaro Carvalho<sup>2</sup>, Sara M Maskal<sup>2</sup>, W Scott Butsch<sup>3 4</sup>, Lucas R Beffa<sup>2</sup>, Clayton C Petro<sup>2</sup>, David M Krpata<sup>2</sup>, Ajita S Prabhu<sup>2</sup>, Michael J Rosen<sup>5</sup>, Benjamin T Miller<sup>2</sup>

- 258 patients with a BMI 40-55 kg/m<sup>2</sup> who are planning to undergo open retromuscular ventral hernia repair are randomized to a **six-month preoperative medical weight loss program** followed by surgery or upfront surgery.
- Designed to address the current evidence gap regarding the impact of preoperative weight loss on quality of life, wound morbidity, recurrence, and cost-effectiveness, and its results are anticipated to inform future guidelines.



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## Robotic ventral hernia repair in morbidly obese patients: perioperative and mid-term outcomes

Fahri Gokcal<sup>1</sup>, Sara Morrison<sup>1</sup>, Omar Yusef Kudsi<sup>2</sup>

- **Results:** Fifty patients with median BMI 42.9 kg/m<sup>2</sup> were included. The postoperative complication rate was 46%.
- The most frequent complication was persistent pain/discomfort (32%) in early postoperative period.
  - Minor complications (Clavien-Dindo grade-I and II) were seen in 40% of patients while major complications (Clavien-Dindo grade-III and IV) were seen in 6%.
- **Hernia recurrence was seen in 2%** and the mean freedom-of-recurrence was 57.4 months (95% CI 54.6-60.2).
- **Conclusions:** The results indicate the safety and efficacy of RVHR in morbid obesity with a low recurrence rate as well as a long freedom-of-recurrence time. Further studies are needed to better elucidate the role of robotic surgery in morbidly obese patients.

# 2025: GLP-1 receptor agonists for obese patients undergoing elective hernia repair

- Patients were asked to achieve a BMI  $\leq 33$  kg/m<sup>2</sup>
- GLP-1 agonists accelerate preoperative weight loss for obese hernia patients without negatively impacting postoperative outcomes.
- Primary outcome was mean time from GLP-1 agonist initiation and initial surgery clinic visit to surgery.
- Mean BMI at GLP-1 agonist initiation was similar to mean BMI at initial clinic visit for controls (**38.1  $\pm$  4.9** vs 38.2  $\pm$  2.7 kg/m<sup>2</sup>, p = 0.66).
- The mean time from GLP-1 agonist initiation to surgery was significantly shorter than initial clinic visit to surgery for controls (**6.3  $\pm$  4.0** vs 14.7  $\pm$  17.6 months, p = 0.03).

Spurzem GJ, Broderick RC, Ruiz-Cota P, Hollandsworth HM, Sandler BJ, Horgan S, Grunvald E, Jacobsen GR. GLP-1 receptor agonists are a transformative prehabilitation tool for weight loss in obese patients undergoing elective hernia repair. Surg Endosc. 2025

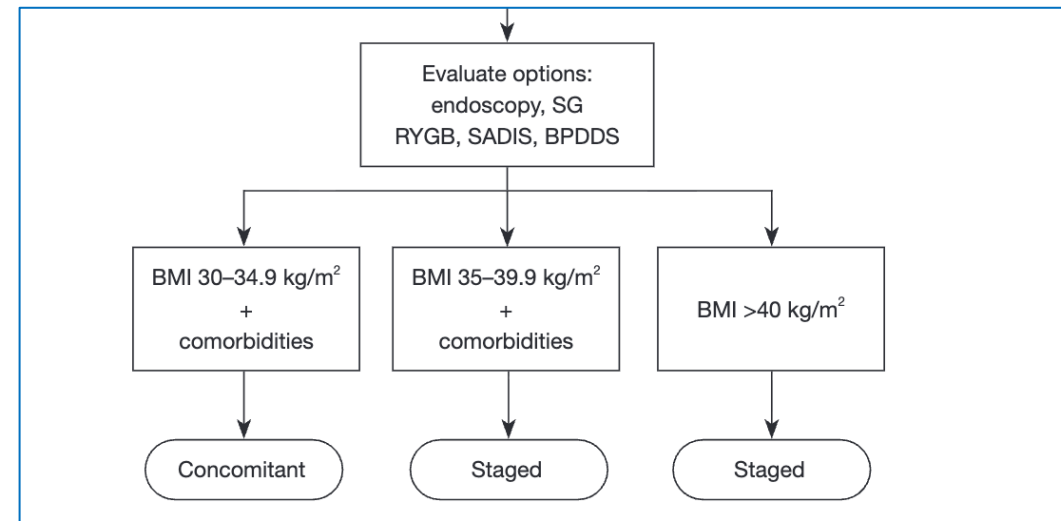
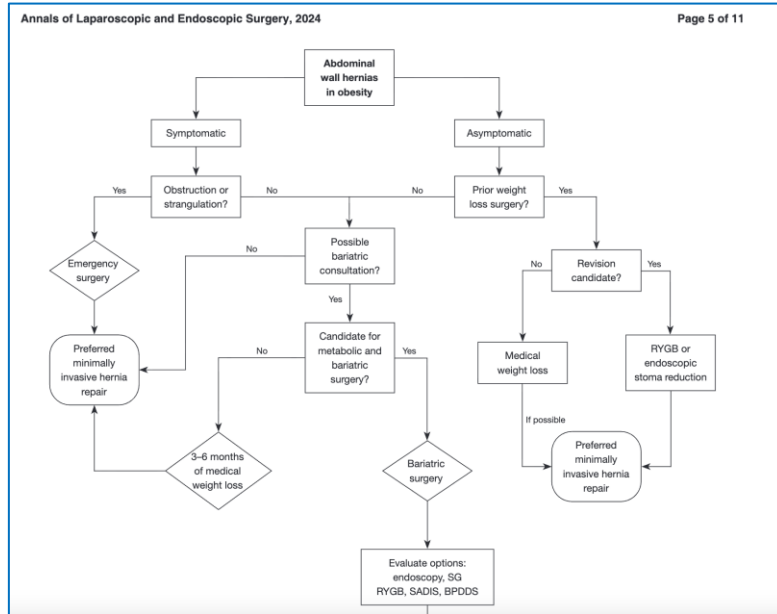


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# Management of abdominal wall hernias in bariatric patients: a narrative review

Gabriela Restrepo-Rodas<sup>1</sup>, Juan S. Barajas-Gamboa<sup>1</sup>, Jose Luis Guzman Fuentes<sup>1</sup>, Claudia Meza Muñoz<sup>1</sup>, Suleiman Al-Baqain<sup>1</sup>, Ronnal Vargas-Cordova<sup>2</sup>, Alfredo Daniel Guerrón<sup>1</sup>



**Conclusions:** The management of AWH in BS patients represents a variety of challenging surgical procedures that require a multidisciplinary approach. The findings presented provide insights into tailored management strategies, their implications for clinical practice, and directions for future research in the field of AWH in bariatric patients.

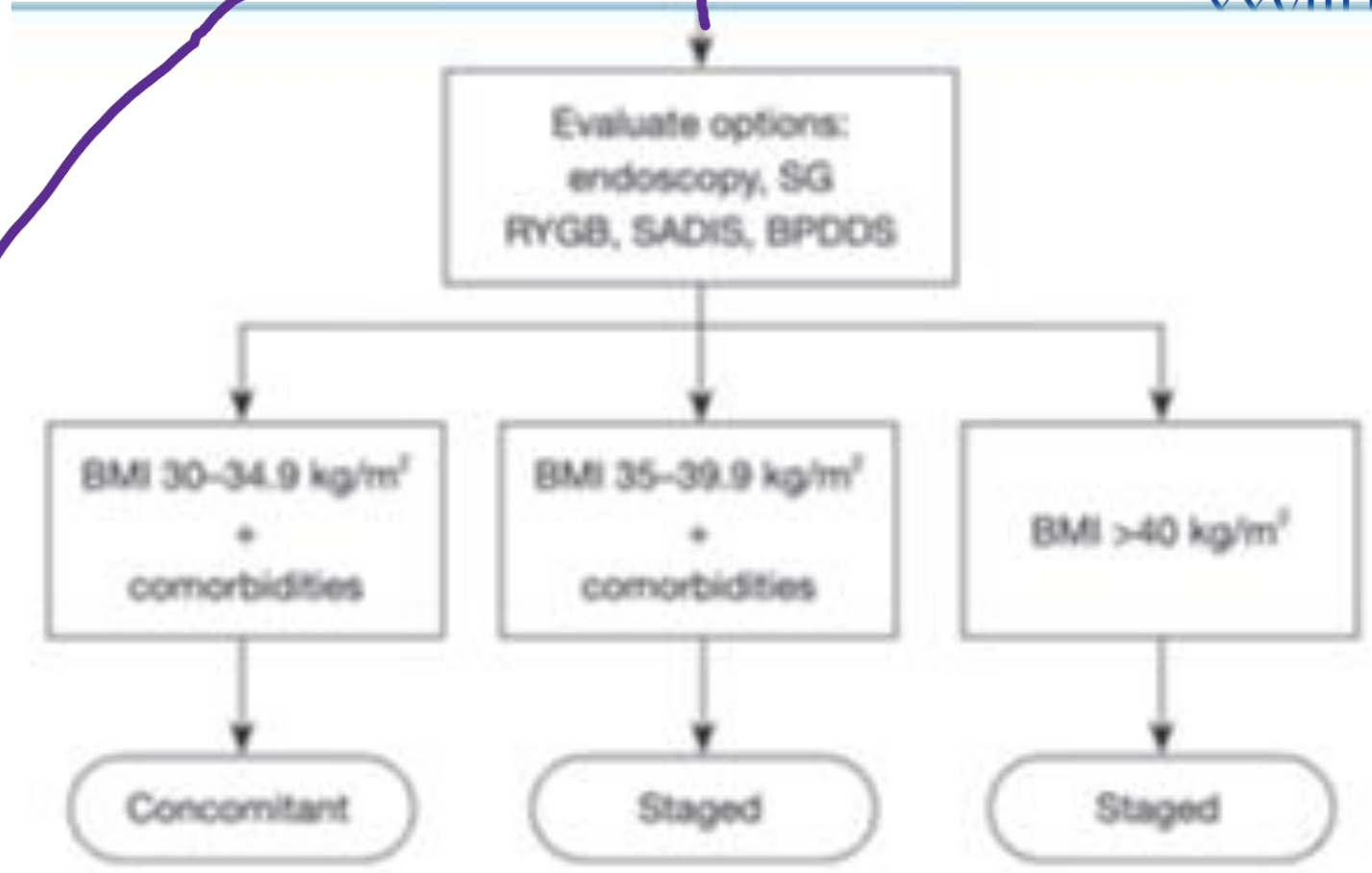
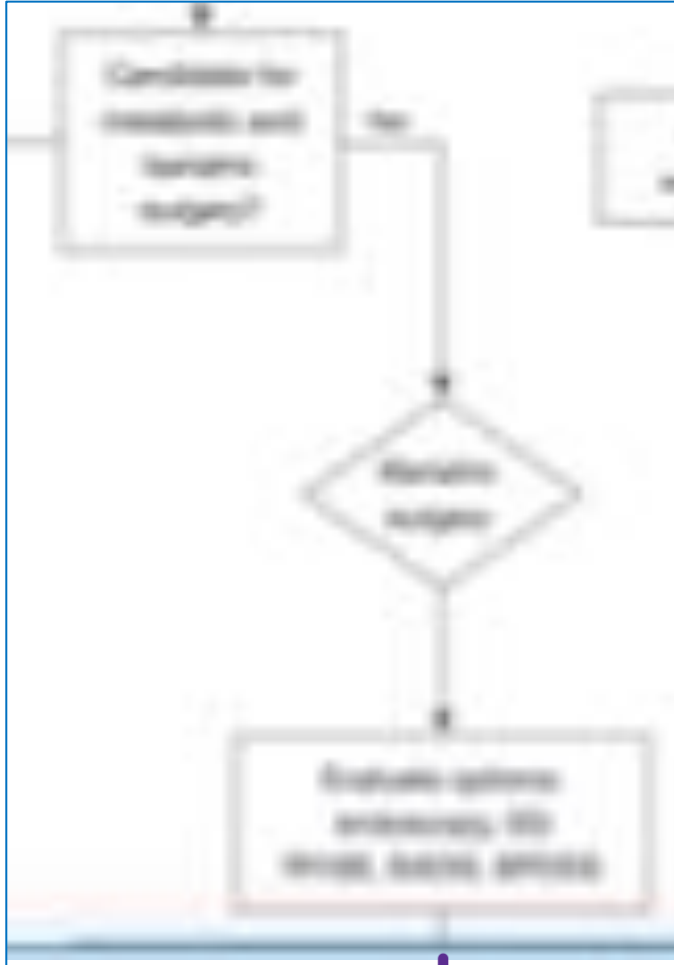


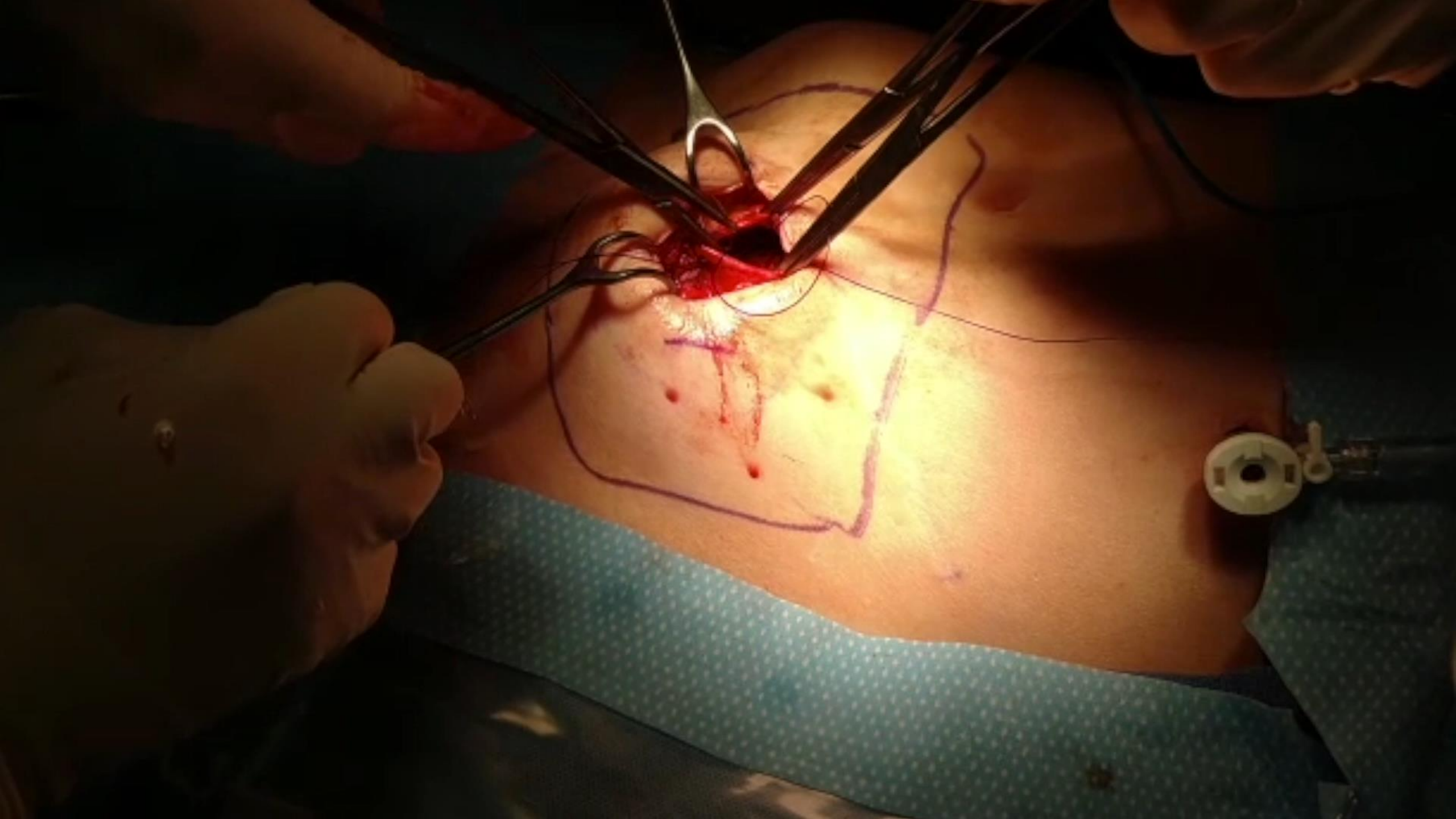


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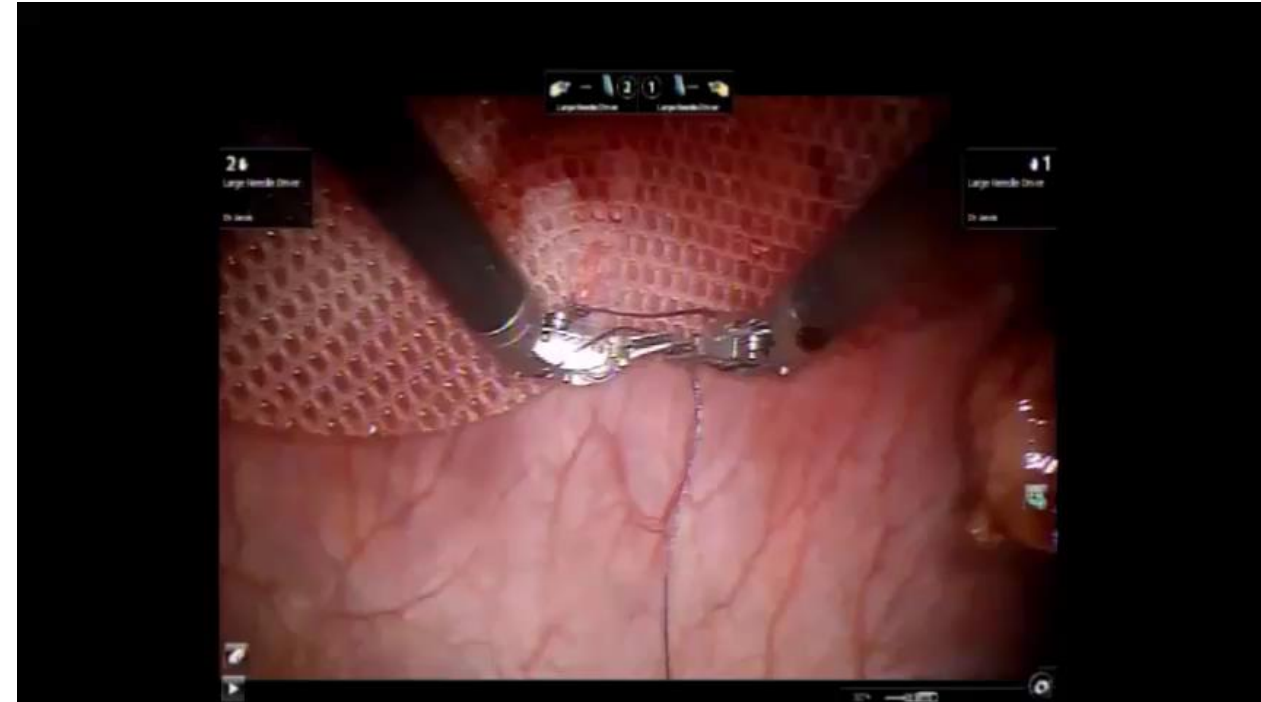
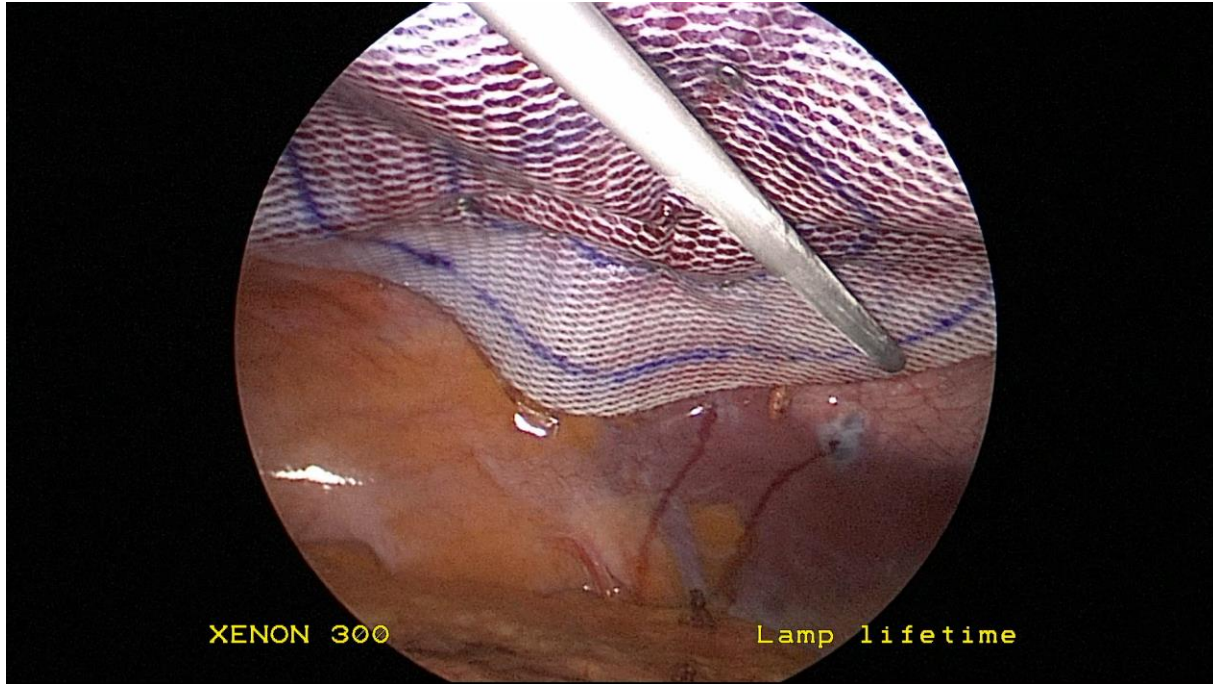
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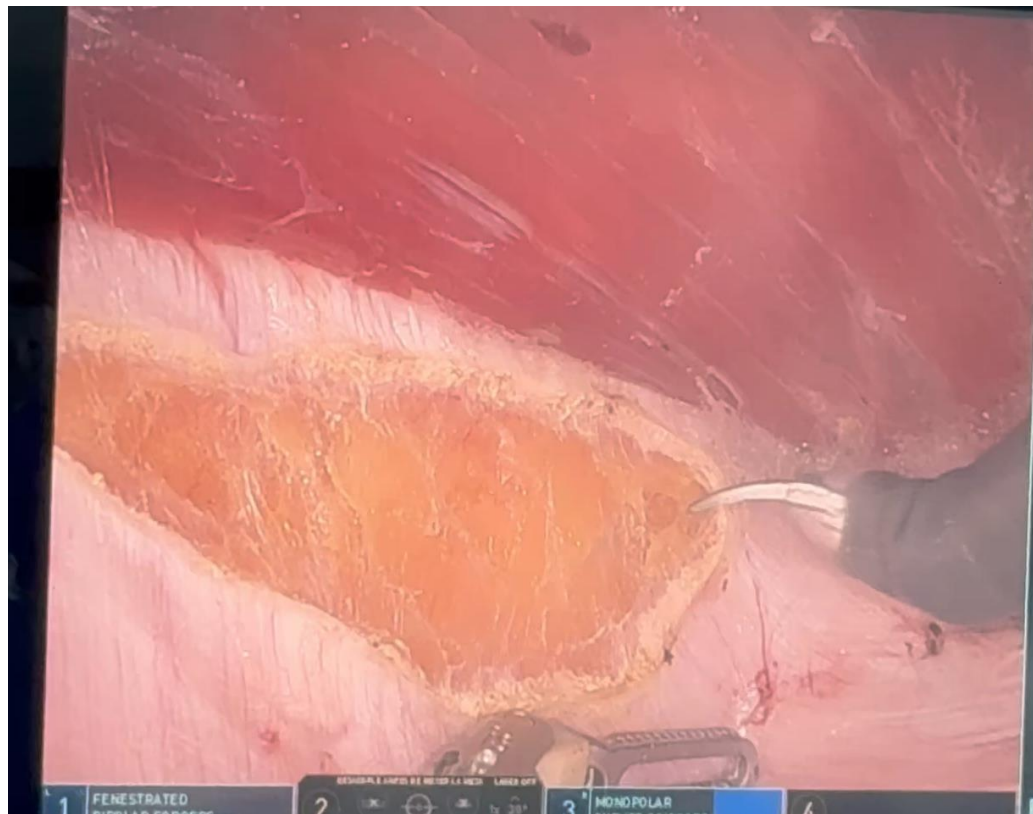


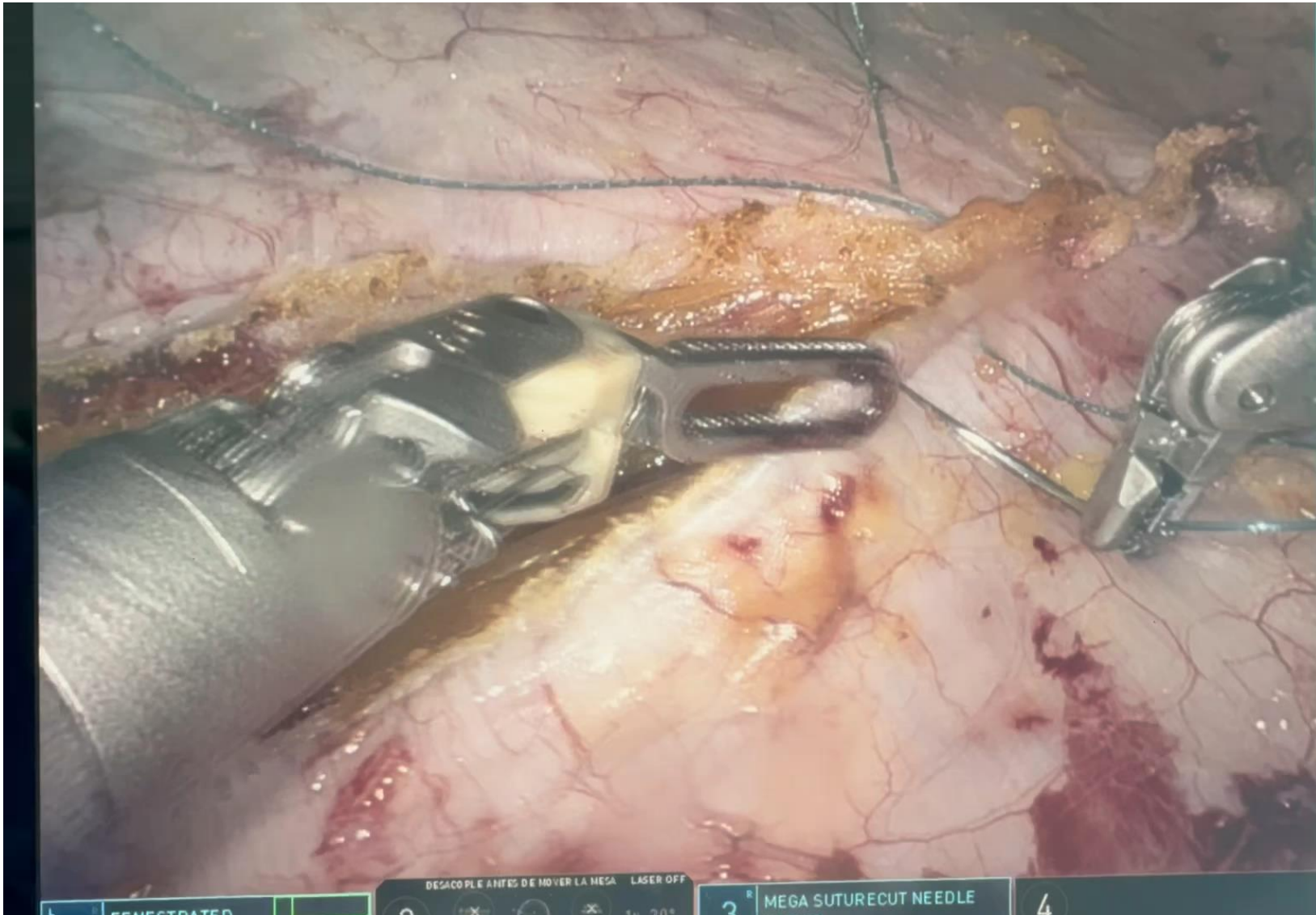


# Lap or roboti IPOM: Suturing vs tacking IPOM



# Robotic eTEP: save for the staged approach





NO SE DETECTA EL USB

CONSOLA	ENDOSCOPIO
TILEPRO 1	TILEPRO 2

OJO IZQUIERDO	OJO DERECHO
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ENDOSCOPIO ARRIBA	ENDOSCOPIO ABAJO
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FIREFLY: APAGADO

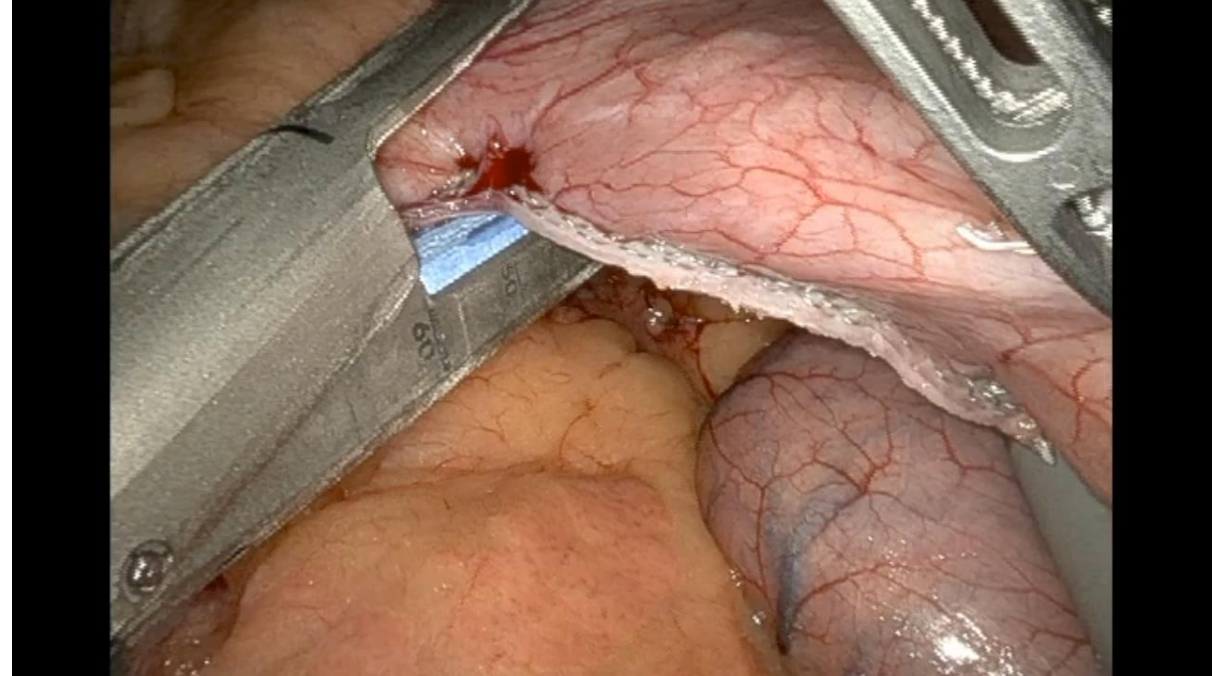
ILUMINADOR: ENCENDIDO

3<sup>R</sup> MEGA SUTURECUT NEEDLE

4

# Ventral Hernia during Obesity Surgery- Incidence

Conclusions:



- 1- Concomitant VHR with mesh and sleeve is safe and feasible.
- 2- Suggestion of VHR after Roux en Y.
- 3- Concomitant VHR without mesh can be advocated.

