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University Medical Center Rotterdam

Rives-Stoppa technique avec ‘selfgripping’ mesh (Progrip)

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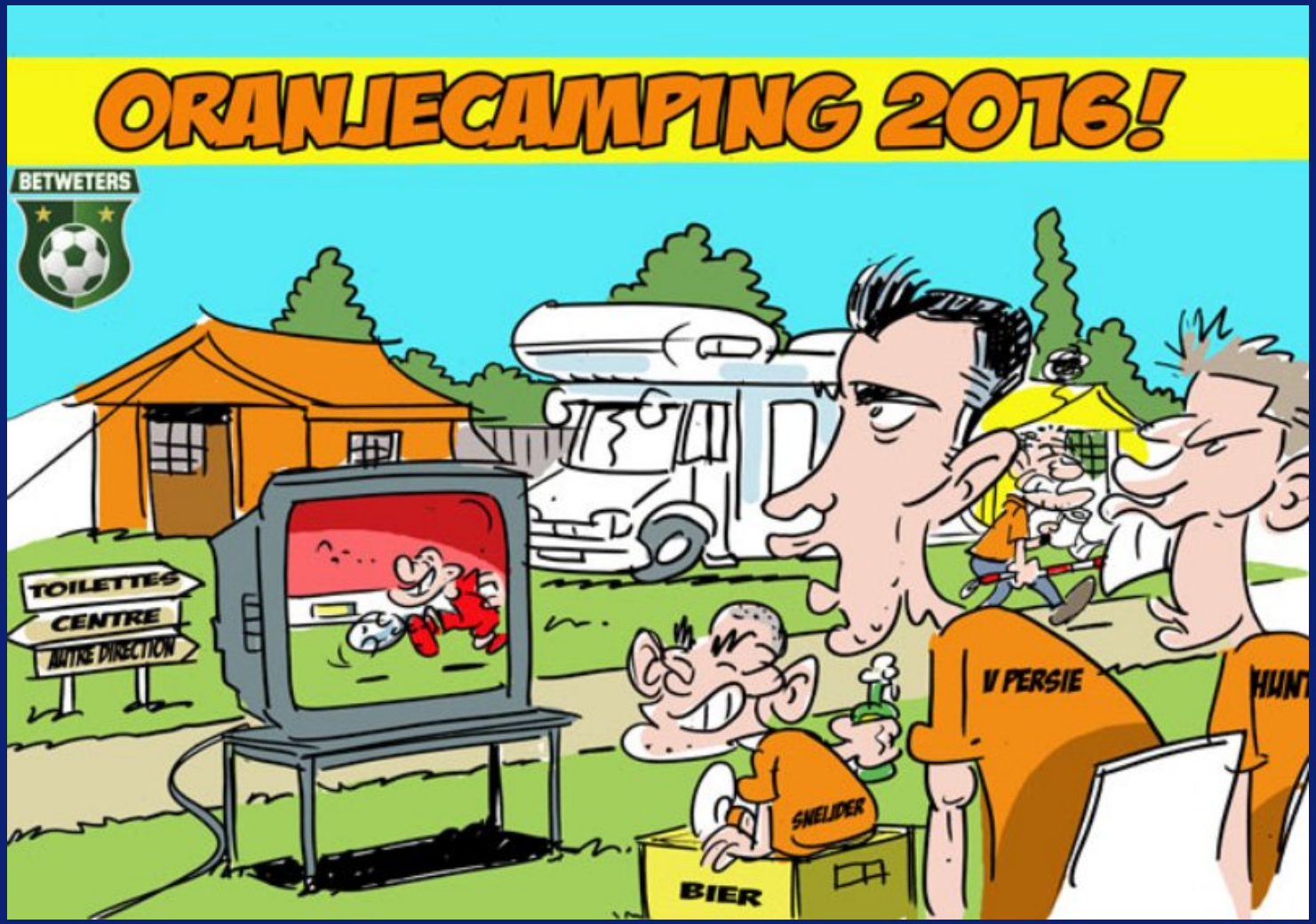
Conflits d'interêt

- APPEAL II-trial (chirurgie colorectale): Medtronic
- INFORMED-trial (mesh-macrophages): Medtronic
- Abdoman-projet (dynamisme paroi abdominale): Medtronic

Frustration



L’équipe de Rotterdam vous salue!

J Chir (Paris). 1992;129:335-43
Surgical treatment of supraumbilical eventrations
Stoppa R, Moungar F, Verhaeghe P.

Abstract
Among postoperative incisional hernias, mid-epigastric eventrations have peculiar features for physiopathological reasons that are summed up in general and specifically in the first paragraph of this paper; they are characterized by the quick retraction of the lateral belt, with the chondrocostal margin of the thorax participating as the upper limit of the cleft, and by the rapidly irreducible diastasis--hence the importance of an early decision to operate. The authors propose three regular procedures with which they are experienced: repair with a large retromuscular nonabsorbable synthetic tulle prosthesis for extensive epigastric eventrations, fillup aponeuroplasty using the sheath of the rectus abdominis associated with a premuscular patch in case of diastasis or of multiple superimposed orifices and suture associated with a small retromuscular auxiliary patch to treat small incisional hernias. The article, mainly dealing with the technical details of the three procedures and of their variants, is concluded by a brief report of the personal results obtained with a series of 616 postoperative eventrations, including 91 mid-epigastric ones, controlled after an average time lapse of 5.5 years.

Open ventral hernia repair using ProGrip™ self-gripping mesh

Steven B. Hopson [a,*], Larry E. Miller [b]

N=20

Follow up: 2 years

No recurrences

International Journal of Surgery 23 (2015) 137–140

Open incisional hernia repair with a self-gripping retromuscular Parietex mesh: a retrospective cohort study.

Verhelst J, de Goede B, Kleinrensink GJ, Jeekel J, Lange JF, van Eeghem

Int J Surg 2015;13:184-8

Abstract

INTRODUCTION:

The Rives-Stoppa and component separation technique are considered to be favourable techniques in the treatment of complex incisional hernias. However, mesh-related complications like chronic pain are still a common problem after mesh repair. As a result, a new self-gripping mesh to omit suture fixation has been developed. This study aimed to evaluate the safety and feasibility of the Parietex™ Progrip self-gripping mesh in retromuscular position for the treatment of incisional hernias.

METHODS:

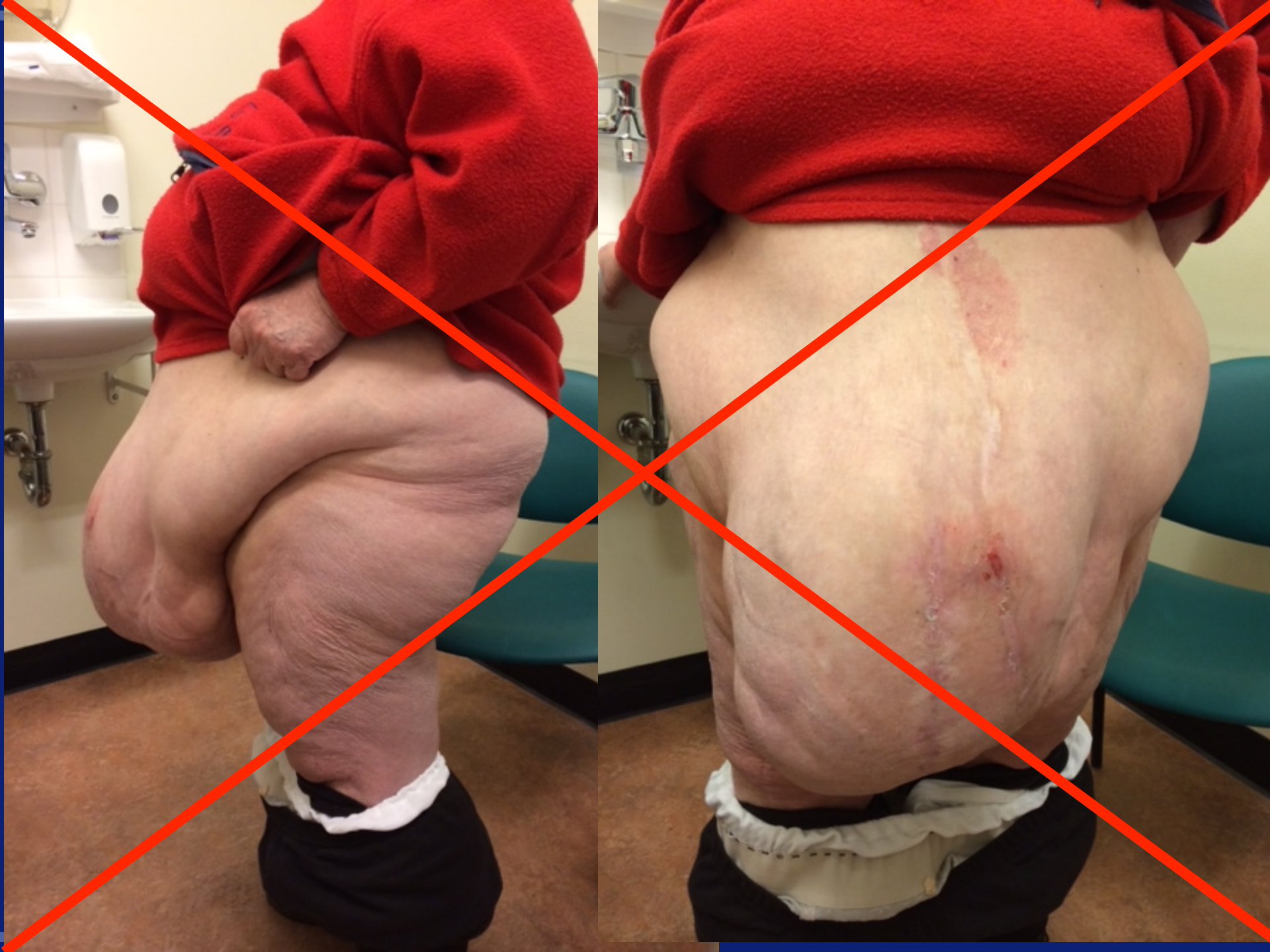
Patients with incisional hernia who underwent repair between June 2012 and June 2014, using a self-gripping mesh in retromuscular position, were included in the study. All patients visited the outpatient clinic to identify postoperative complications and early recurrence.

RESULTS:

A total of 28 consecutive patients with a median age of 48 years were included in the study. Twenty-two patients (79%) were diagnosed with an incisional hernia, of whom nine (32%) had a recurrence. Six patients (21%) had an incisional hernia combined with another abdominal wall hernia. The median follow-up was 12 weeks (IQR: 8-20 weeks). Twenty-three patients (82%) did not report any pain at their final outpatient clinic visit; two patients (7%) reported mild abdominal pain, and three patients (11%) had moderate abdominal pain. None of the 28 patients developed a recurrence during follow-up.

CONCLUSION:

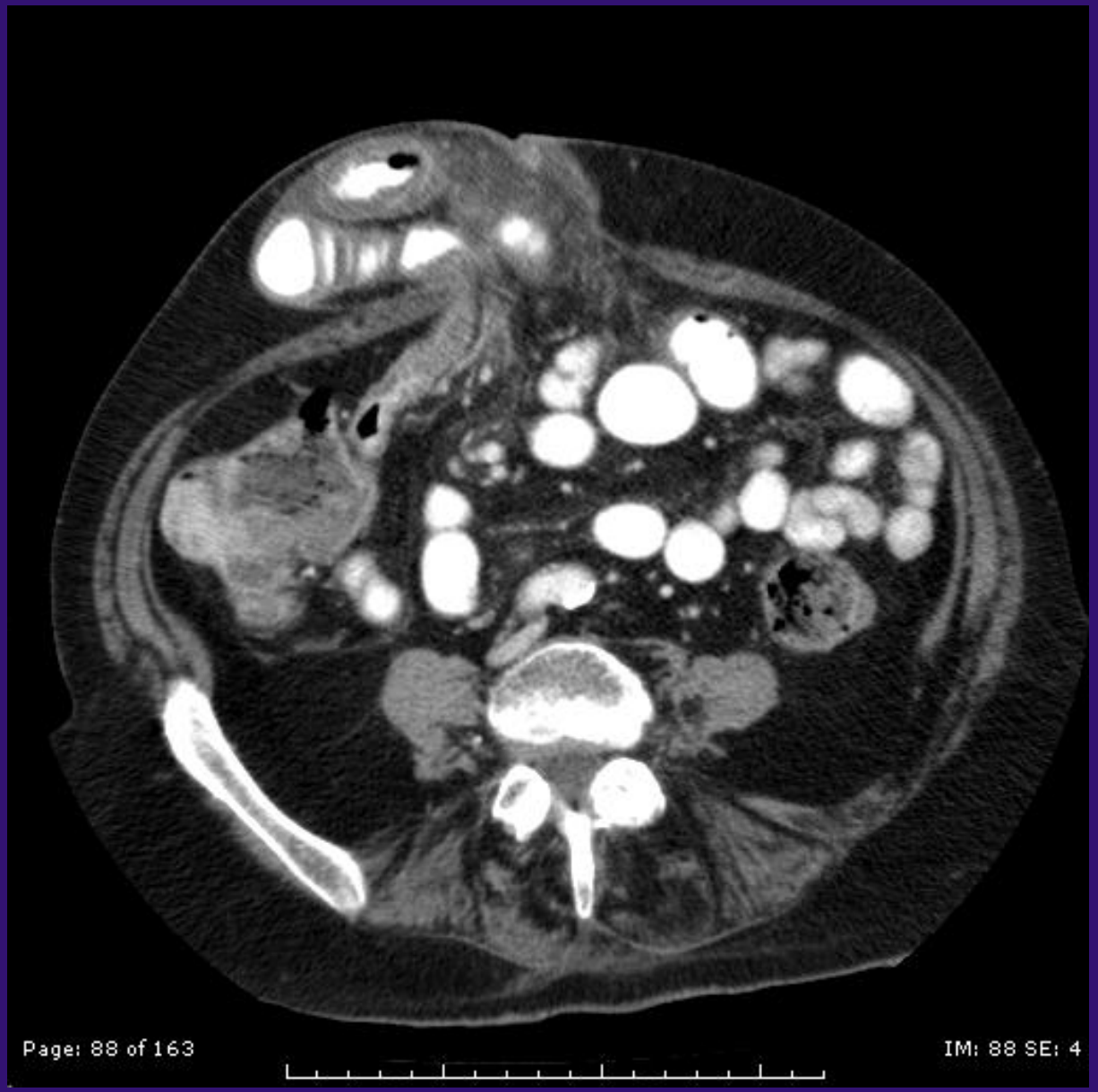
This is the first study concerning the use of a Parietex™ Progrip mesh placed in retromuscular position. The study shows that it is a safe and feasible prosthesis in incisional hernias repair, as short-term recurrence did not occur and adverse events were limited.




R

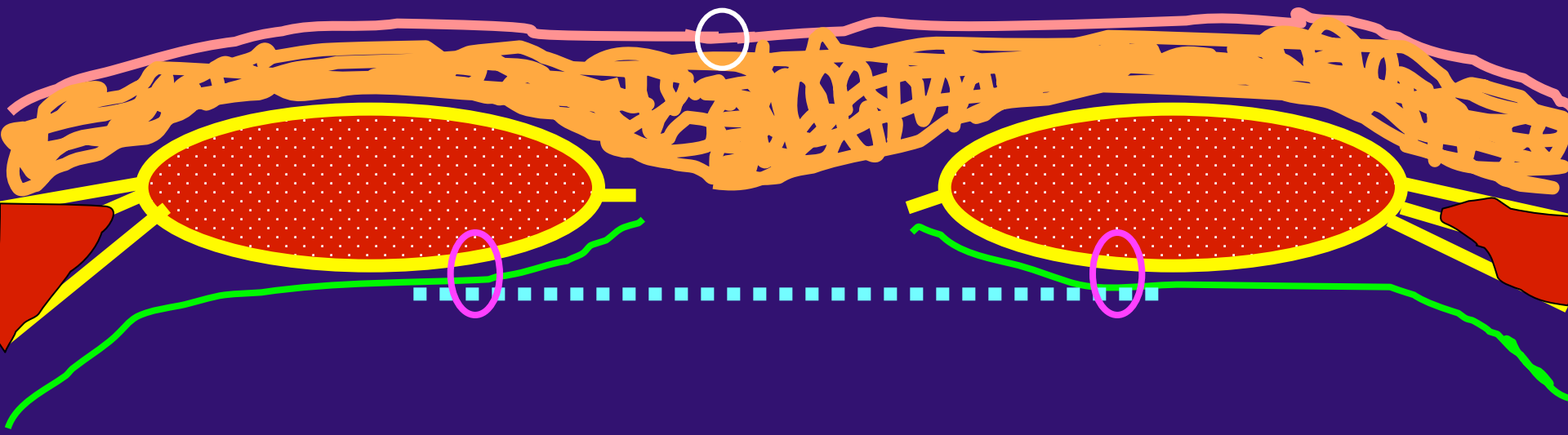
Rives-Stoppa: indication

Rives-Stoppa: col d'hernie: <10cm

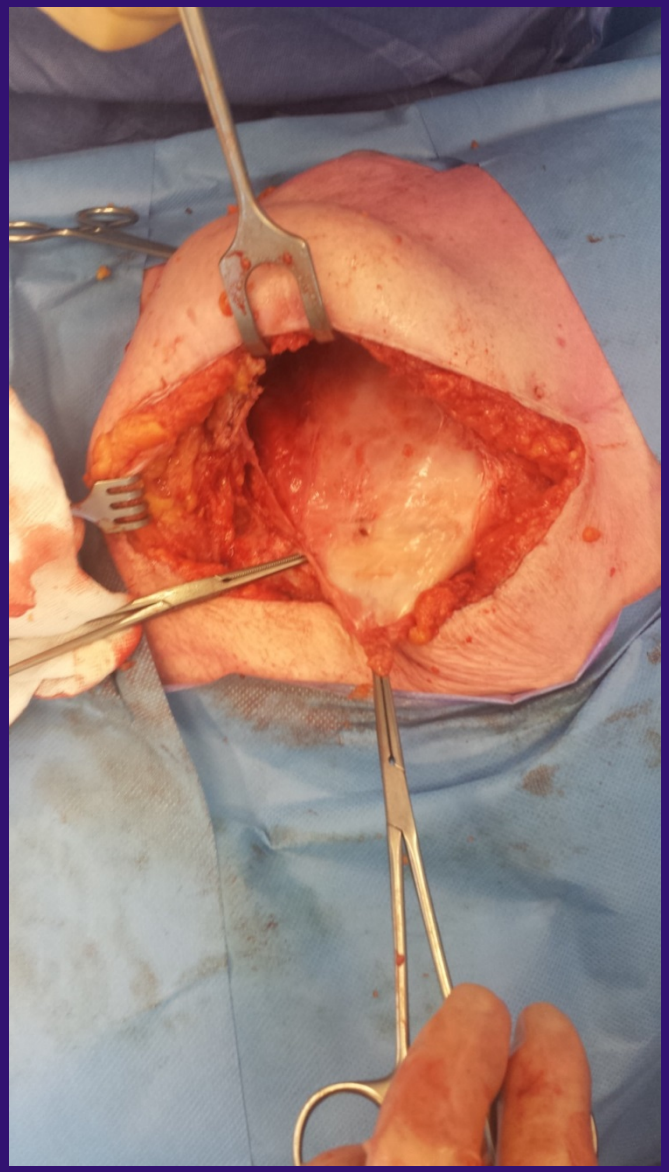


Rives-Stoppa: fistule entéro-cutanée

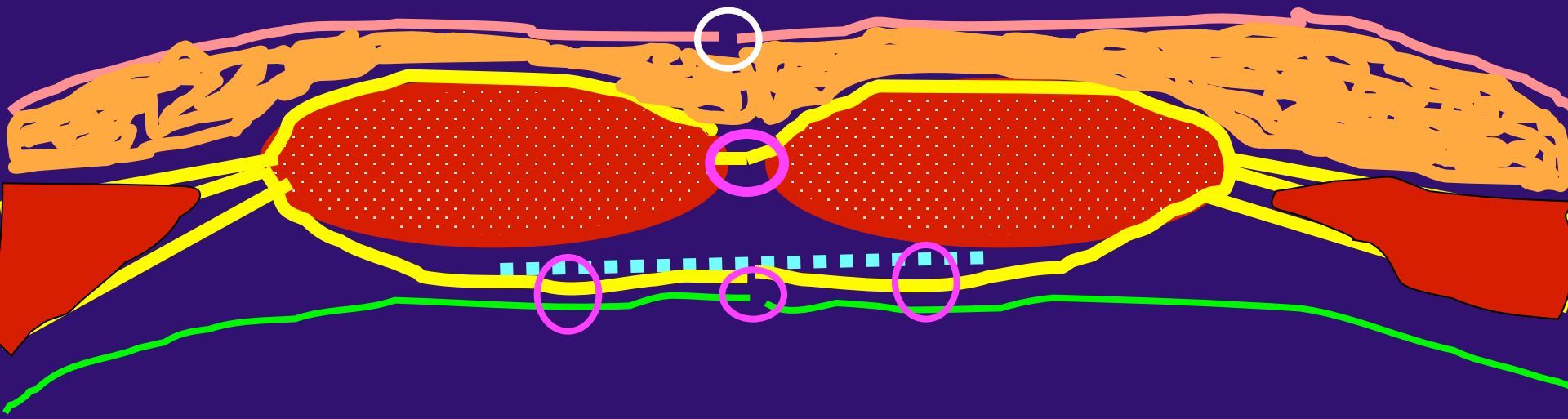
Open bridging-technique (bridging/IPOM)



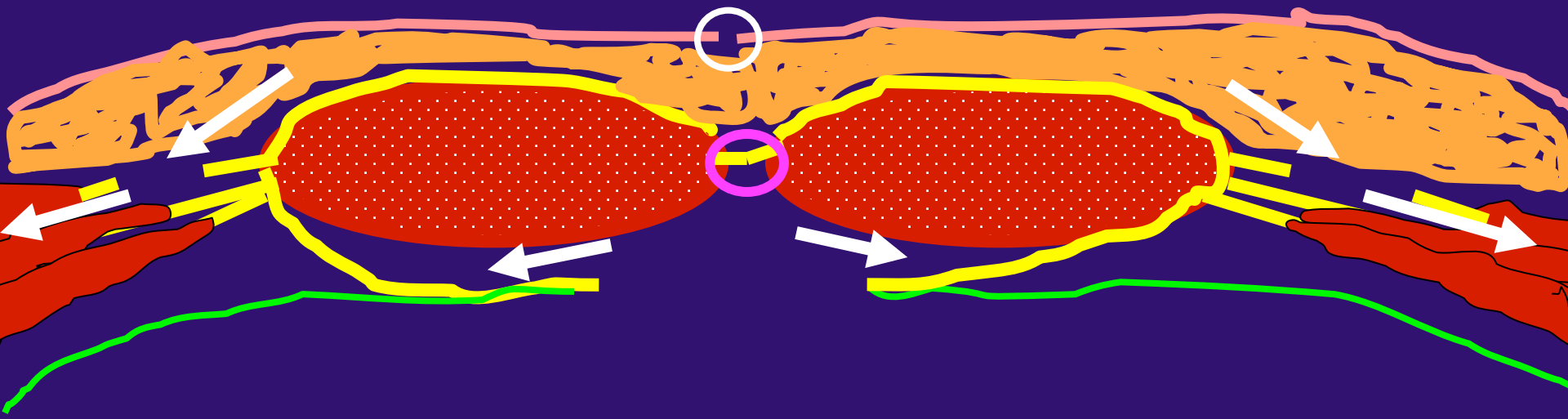
Mesh en position soucutanée avec ‘pseudobursa’ (sérome chronique)



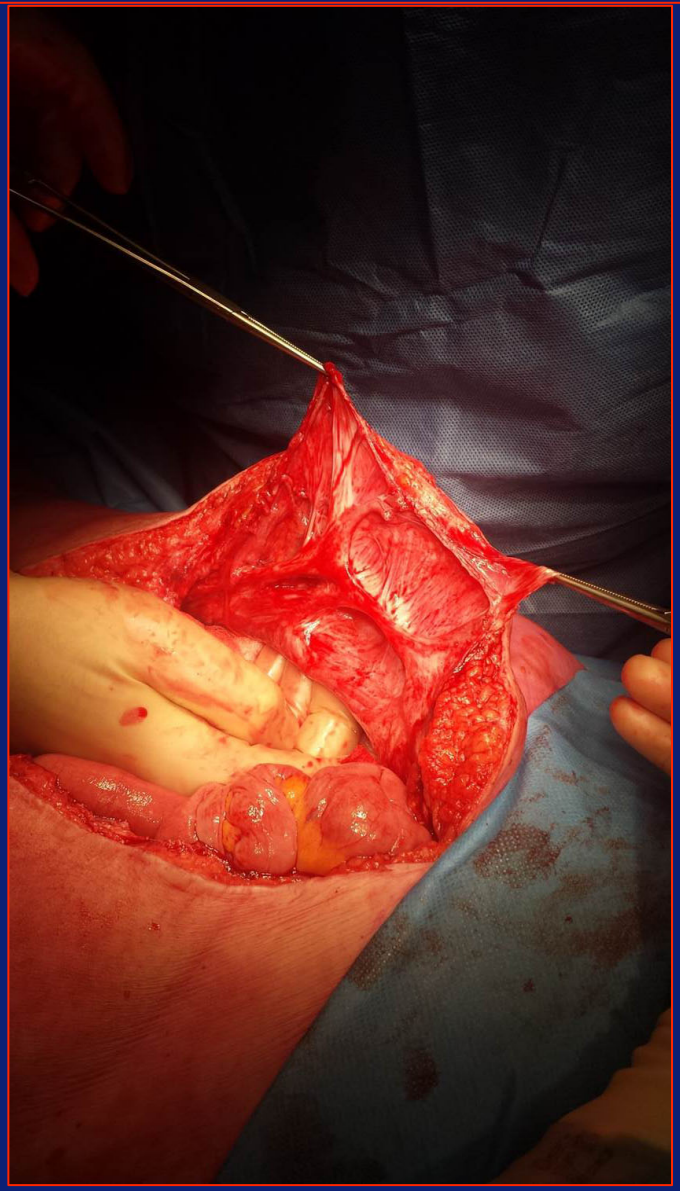
Open sublay (Rives-Stoppa/Schumpelick)



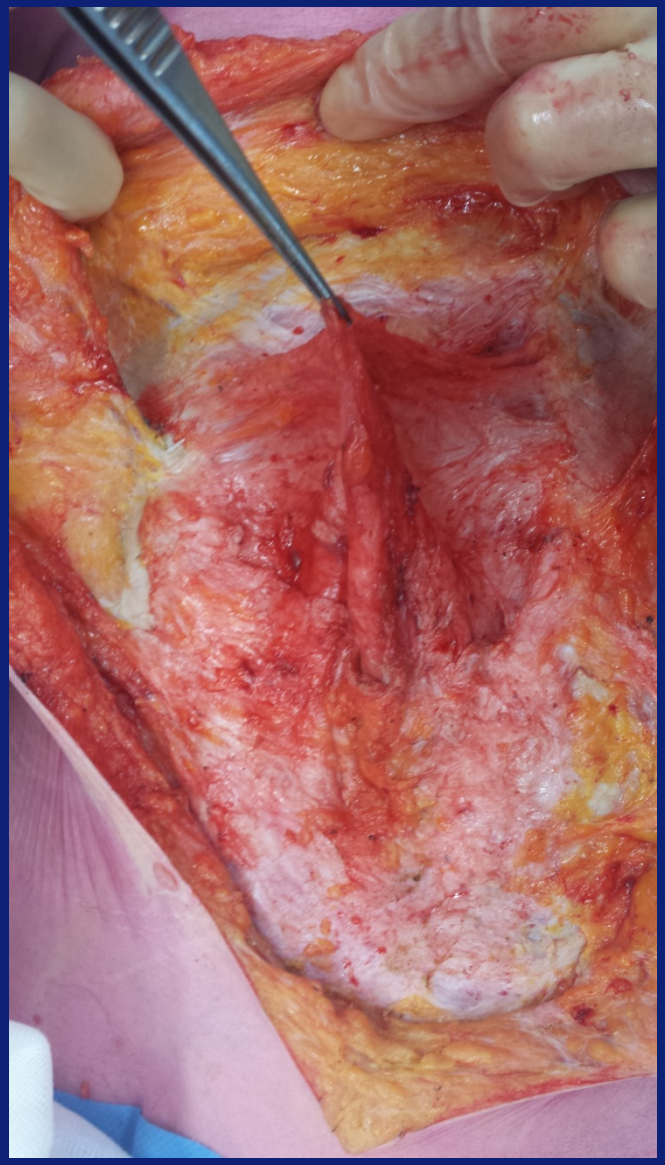
Anterior component separation (Ramirez)

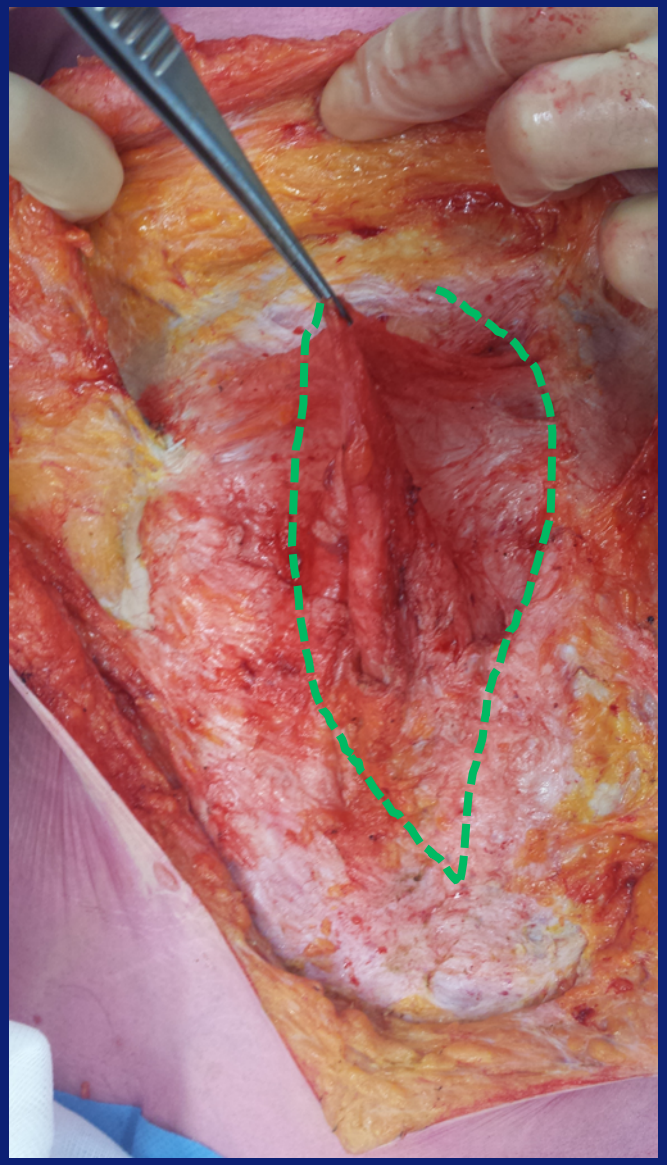


Rives-Stoppa technique
Ouverture du cavité abdominal+résection du sac

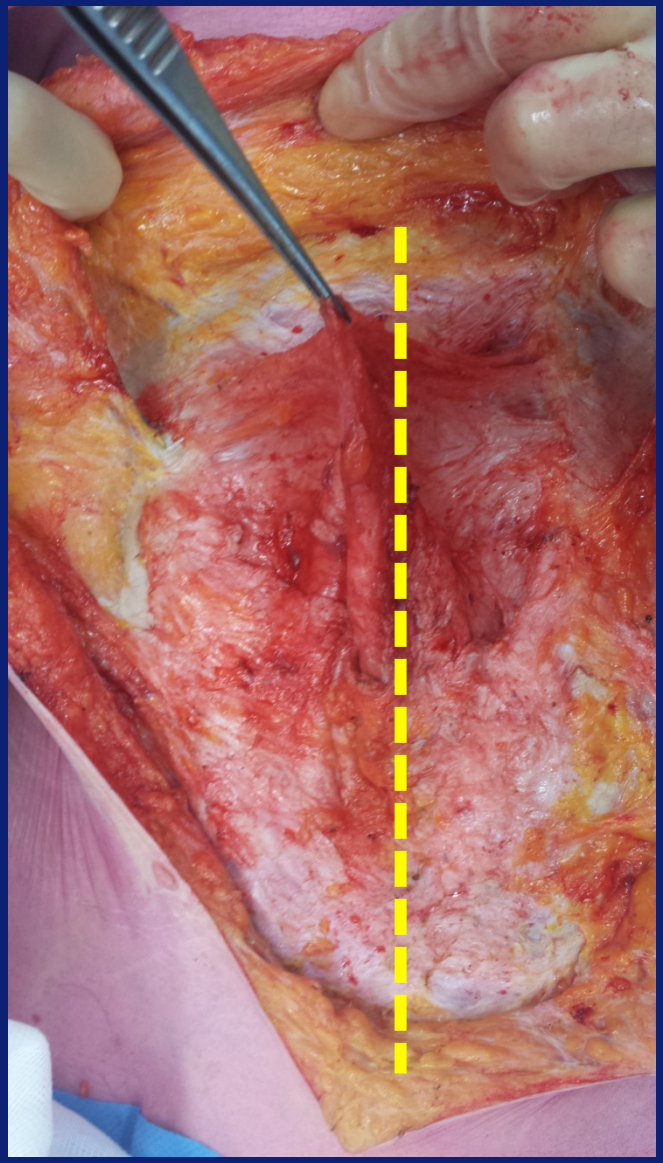


Rives-Stoppa technique: diamètre>7cm: à épargner le sac

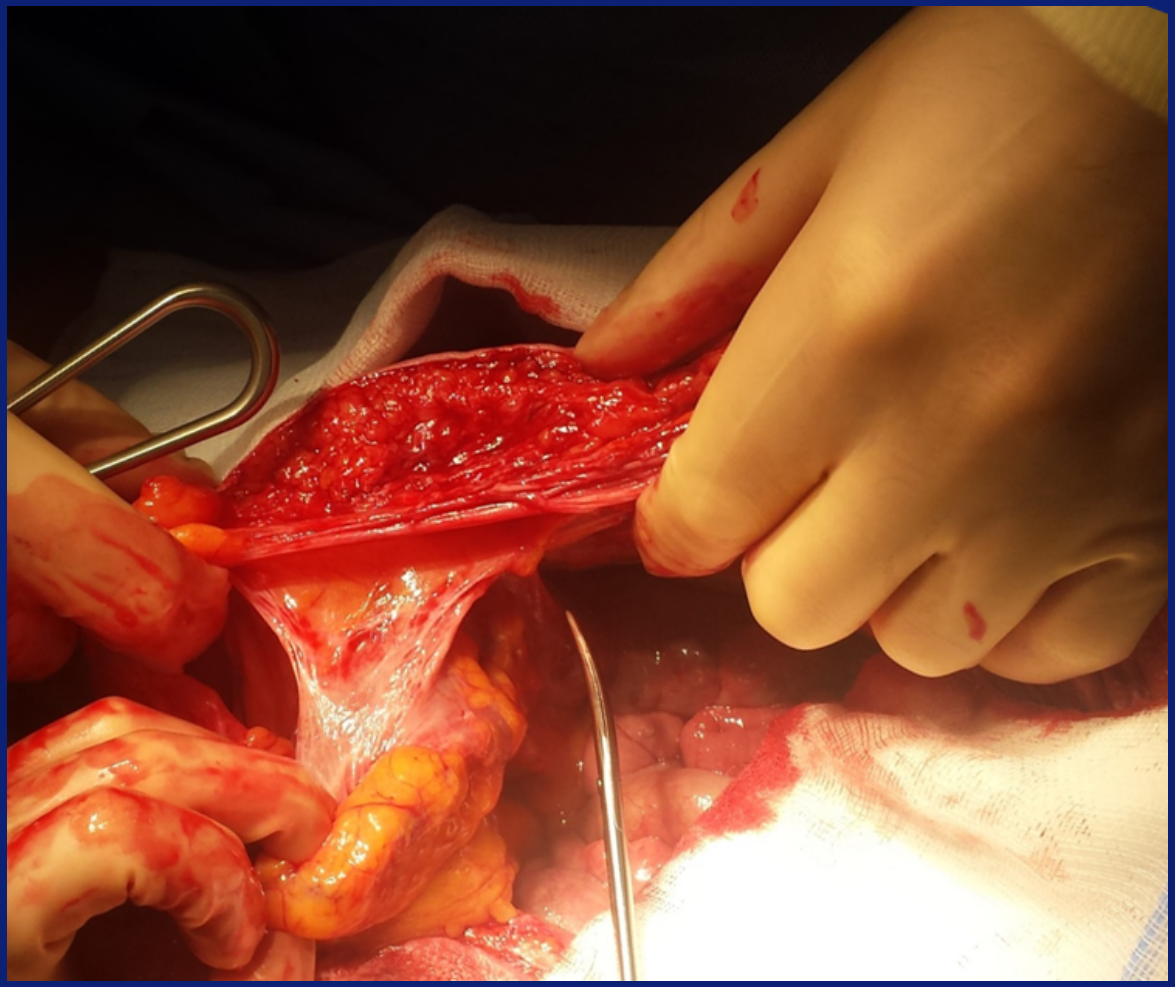




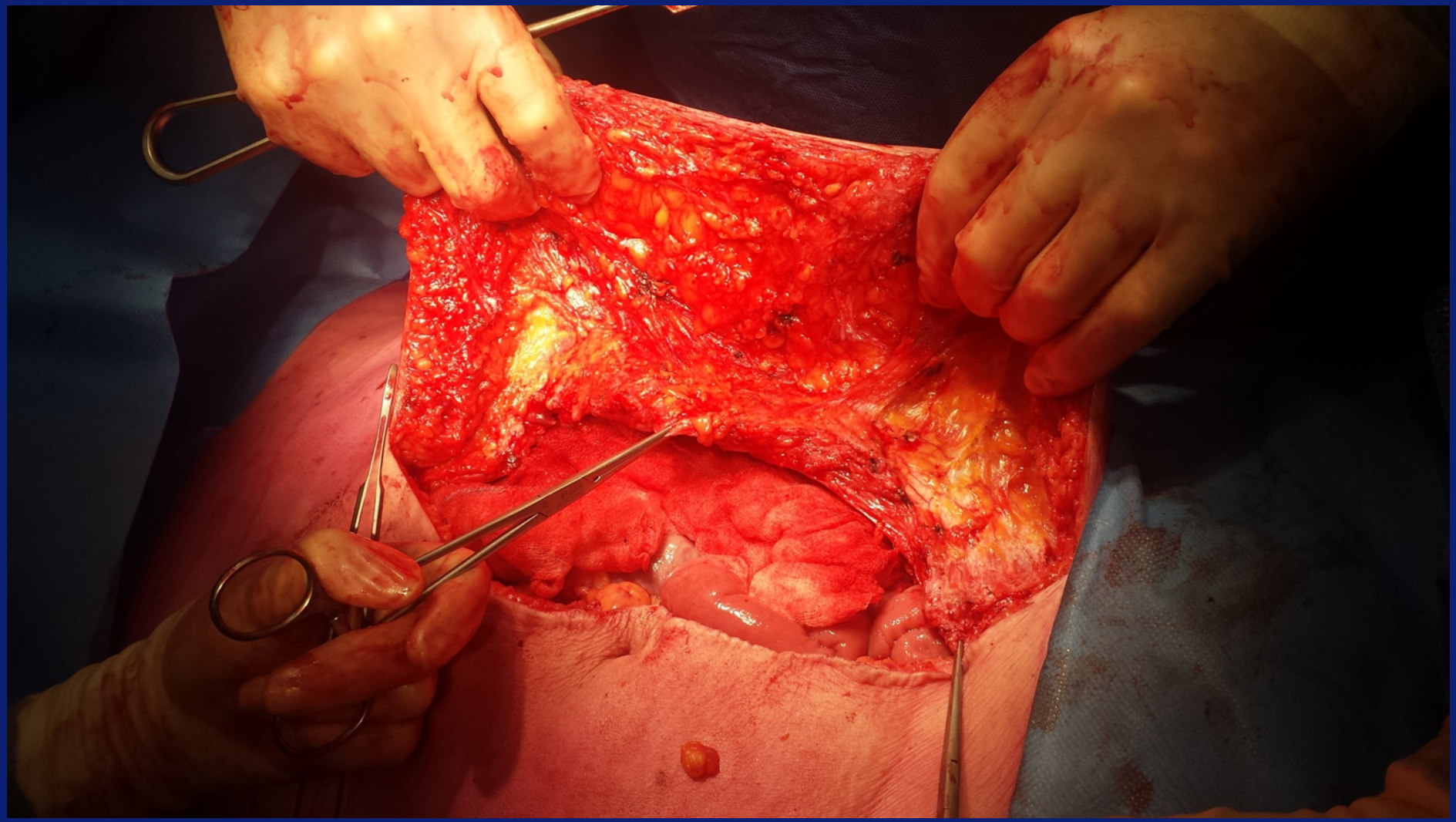
Rives-Stoppa technique: incision du sac



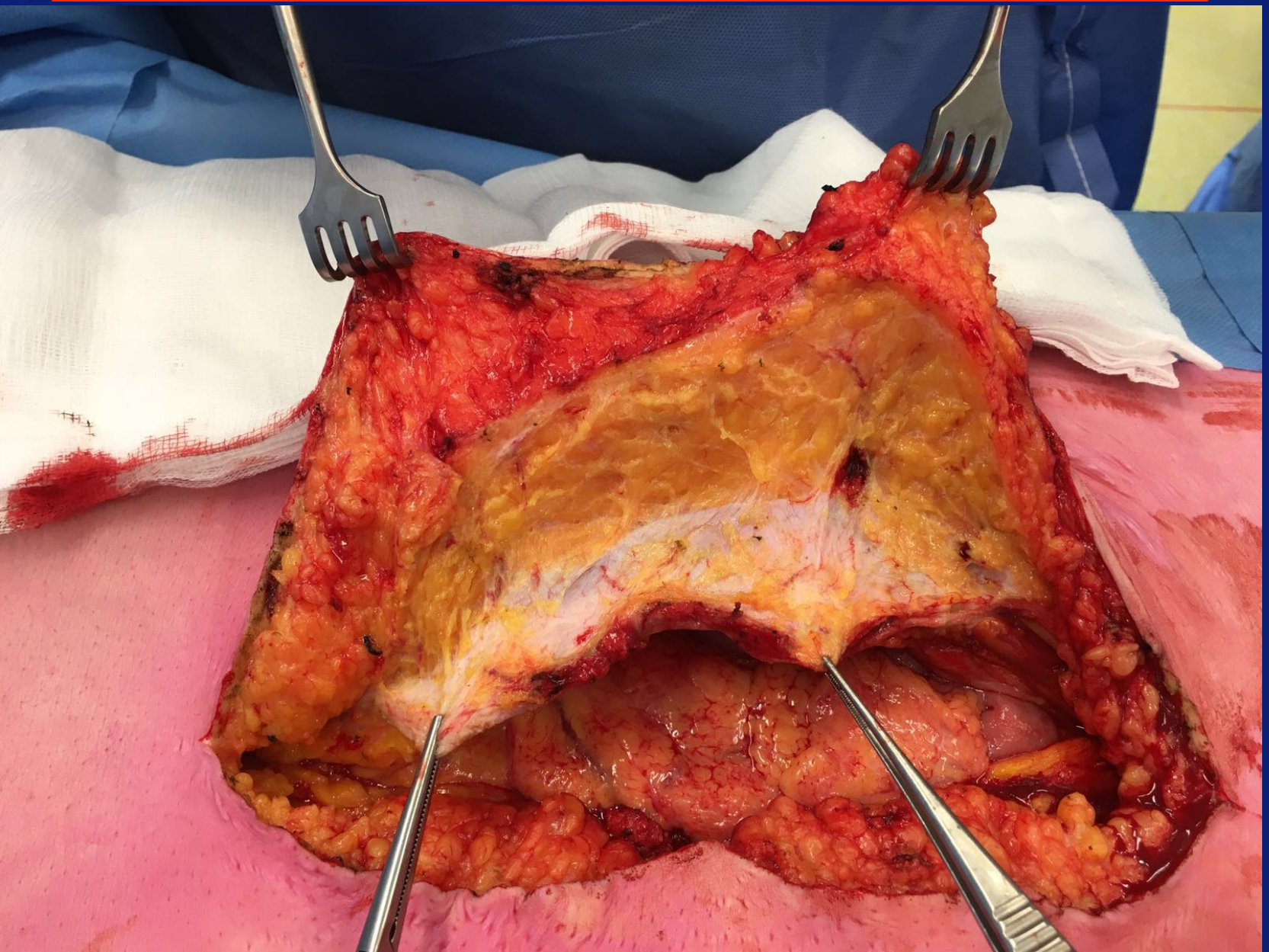
Rives-Stoppa technique: adhésiolyse



Rives-Stoppa technique: dissection of anterior rectus fascia

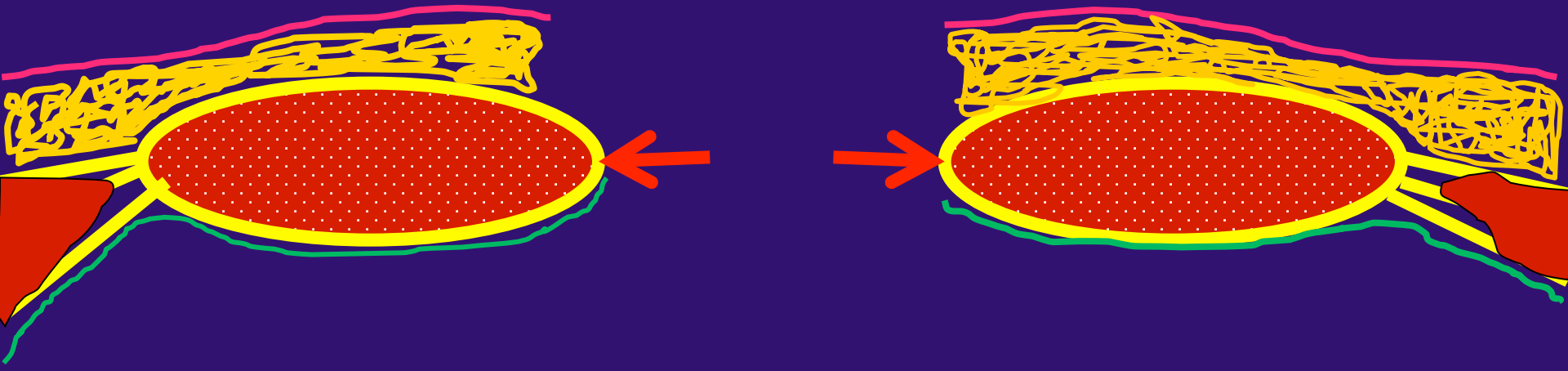


Dissection du plan antérieur limitée



Ventral component separation (Ramirez)

Rives Stoppa-technique: incision de l'enveloppe du rectus



Rives-Stoppa technique
ouverture de l'enveloppe du rectus

Rives-Stoppa technique
ouverture de l'enveloppe du rectus

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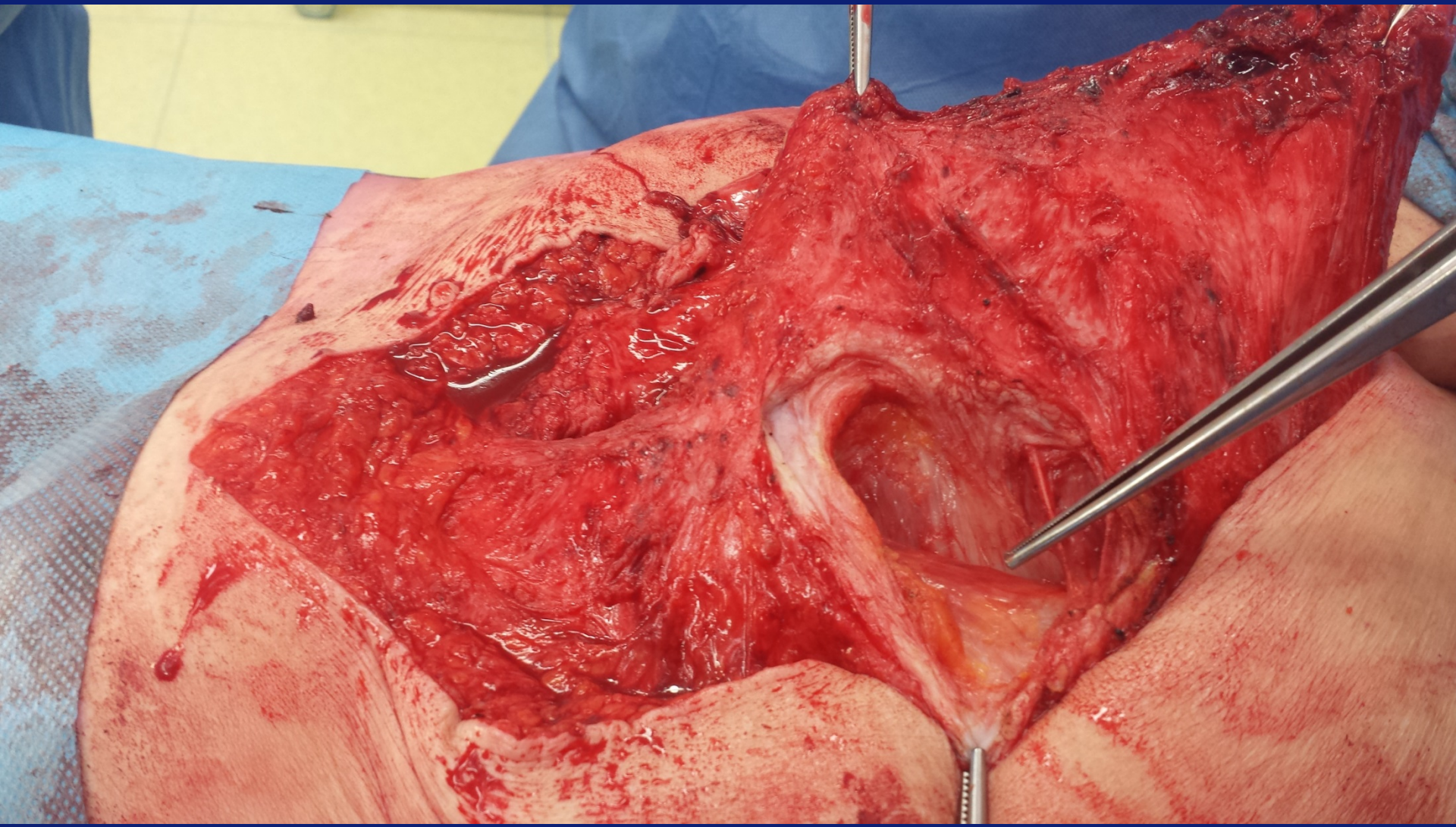
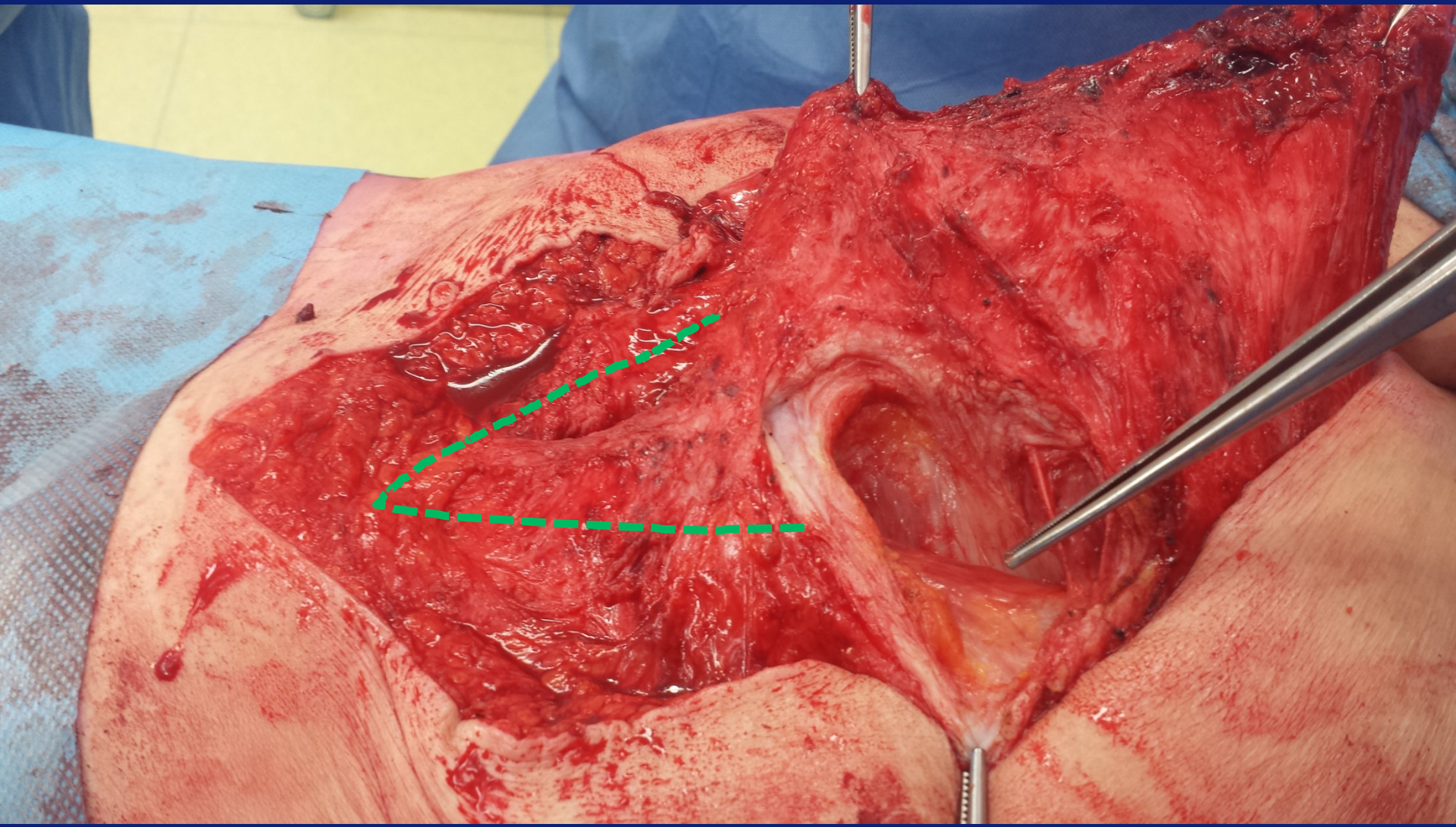
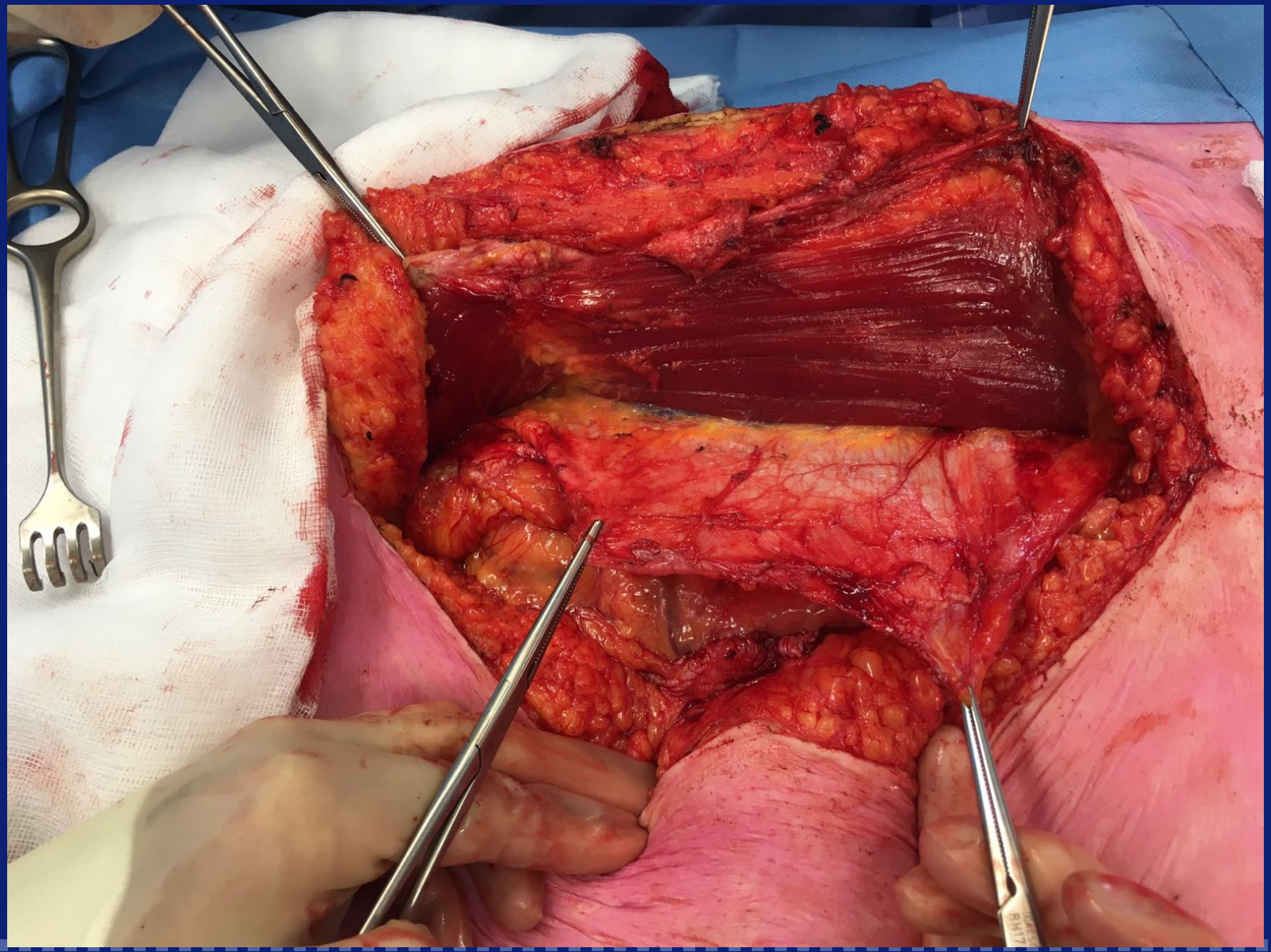
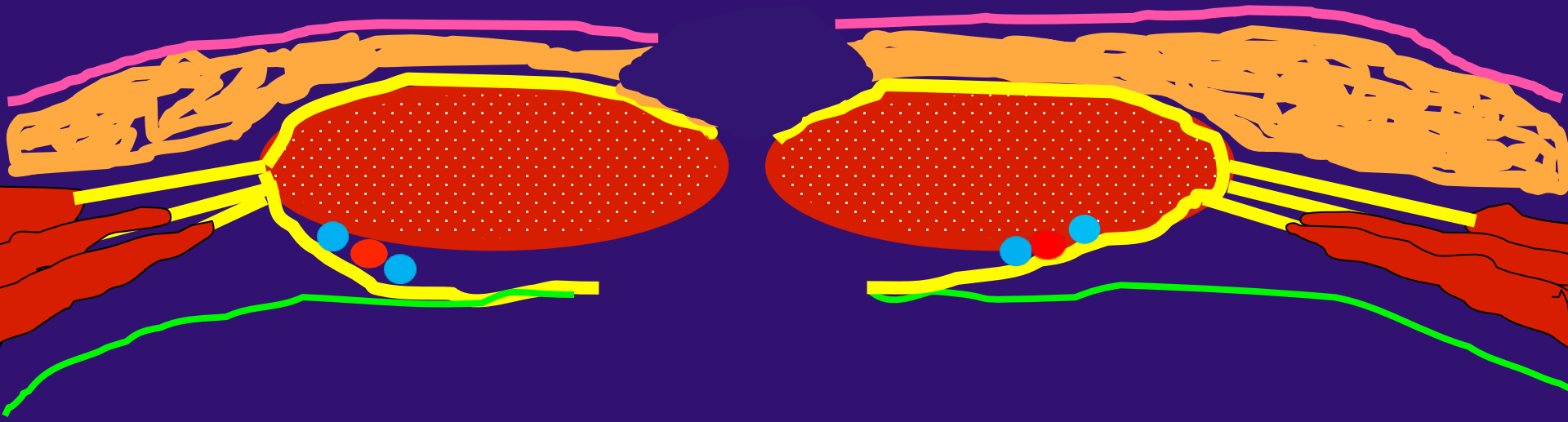




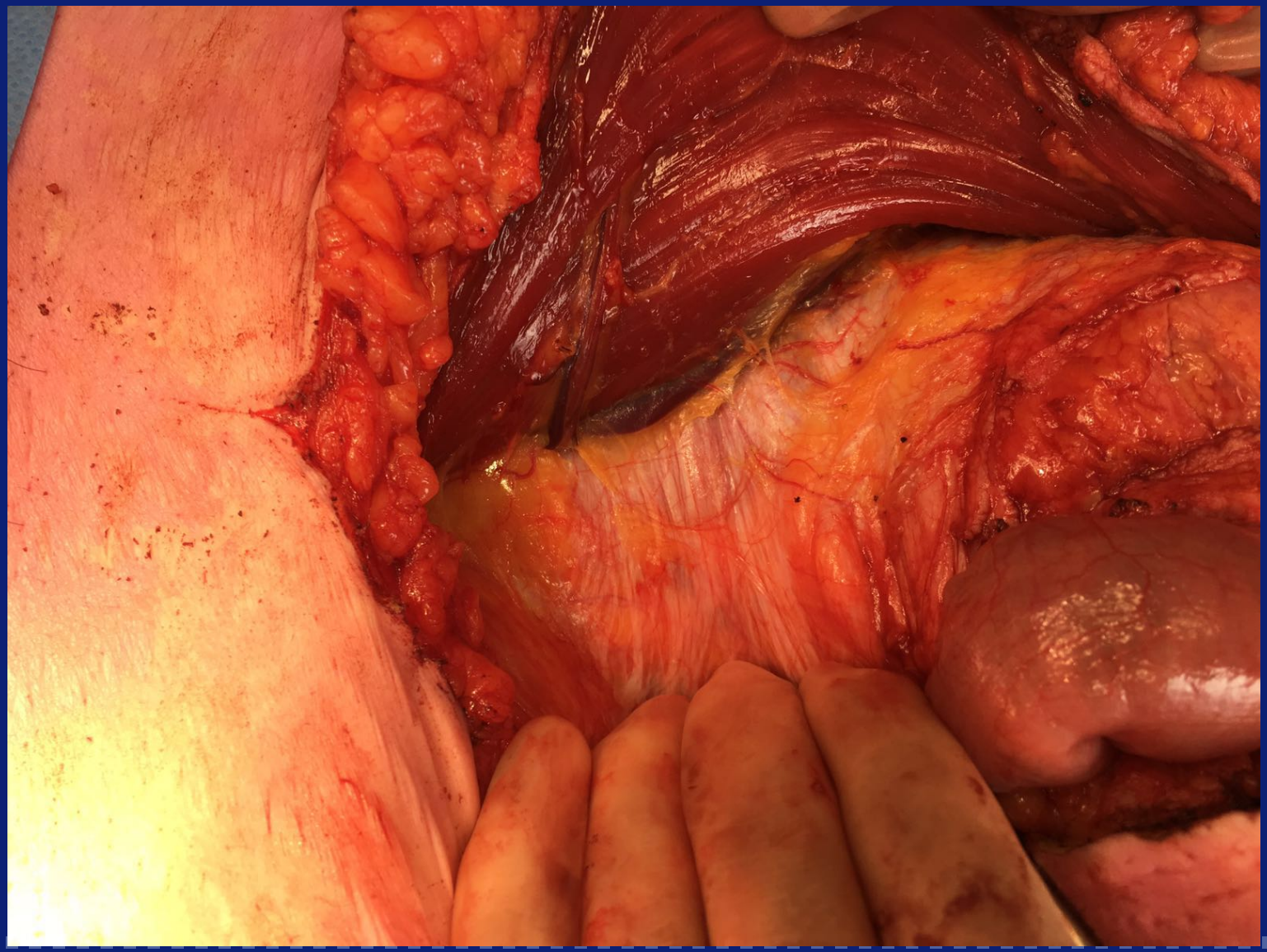
Rives-Stoppa technique: dissection of posterior rectus fascia



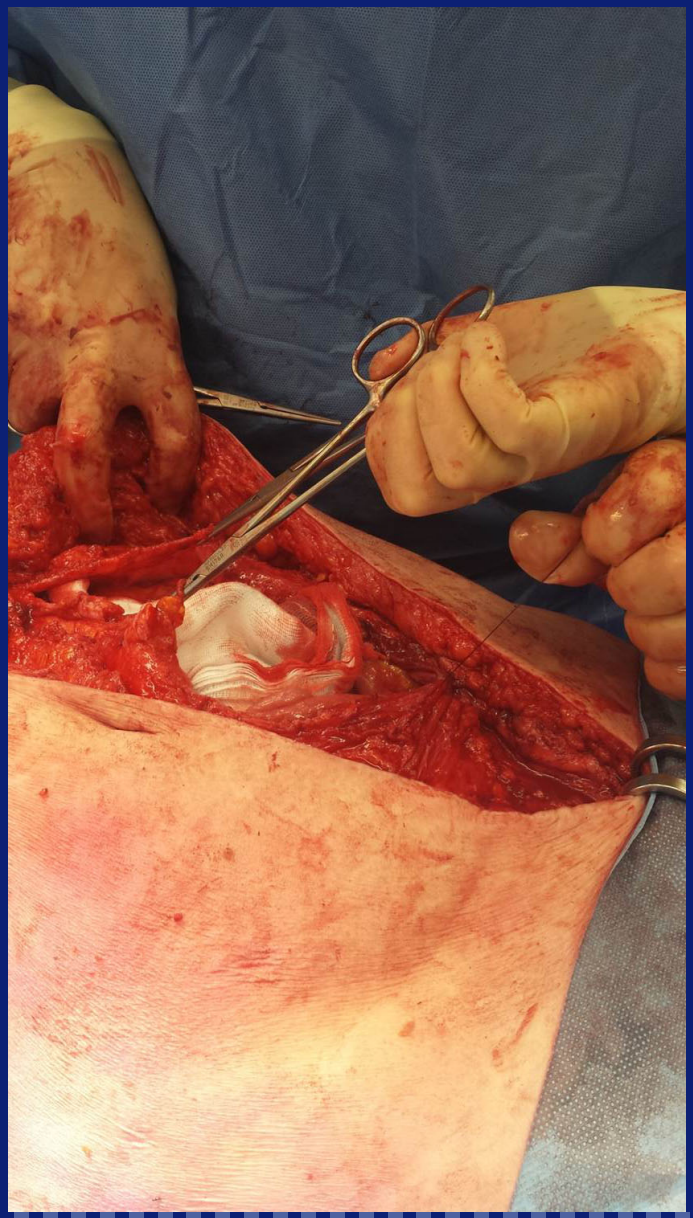
Vaisseaux épigastriques inférieurs

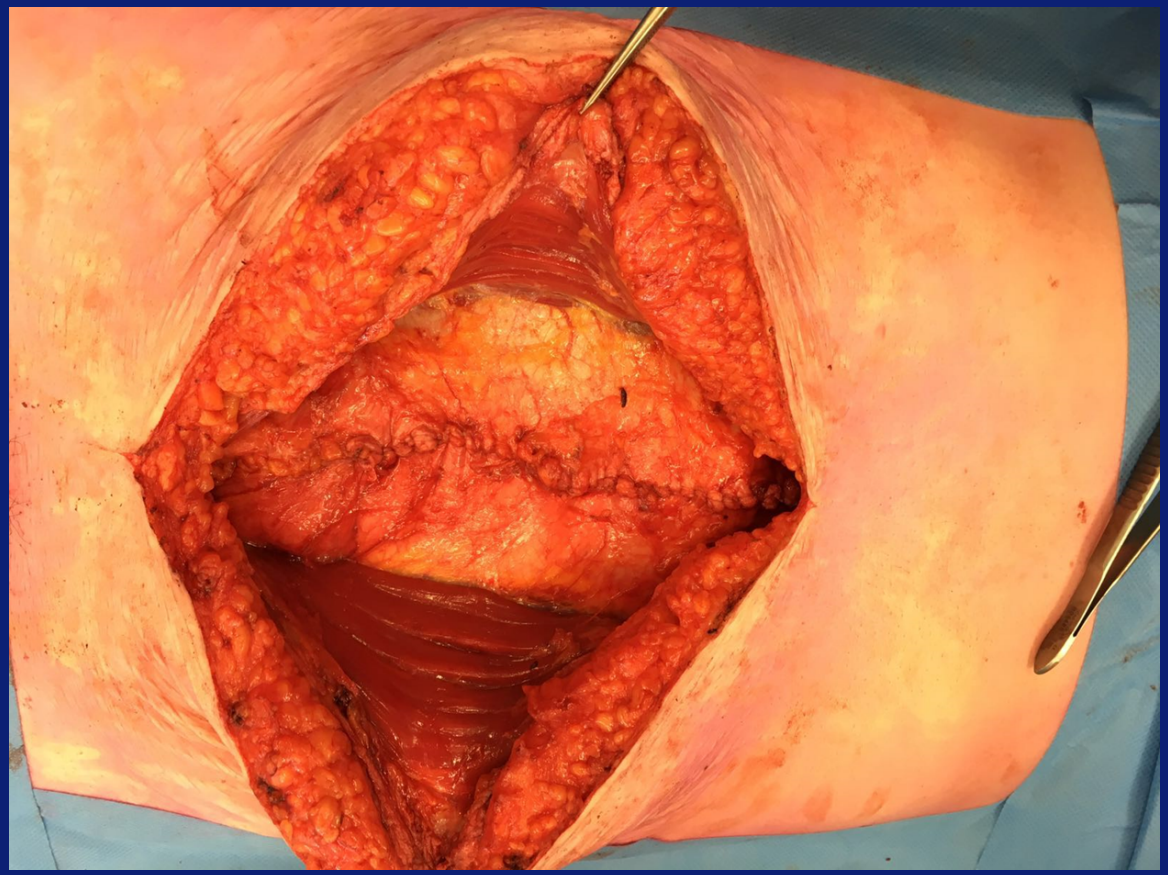


Rives-Stoppa technique: vaisseaux épigastriques inférieurs



Rives-Stoppa technique: fermeture du plan postérieur (PDS 2x0)





Rives-Stoppa technique: position of mesh overlap defaut: >5cm

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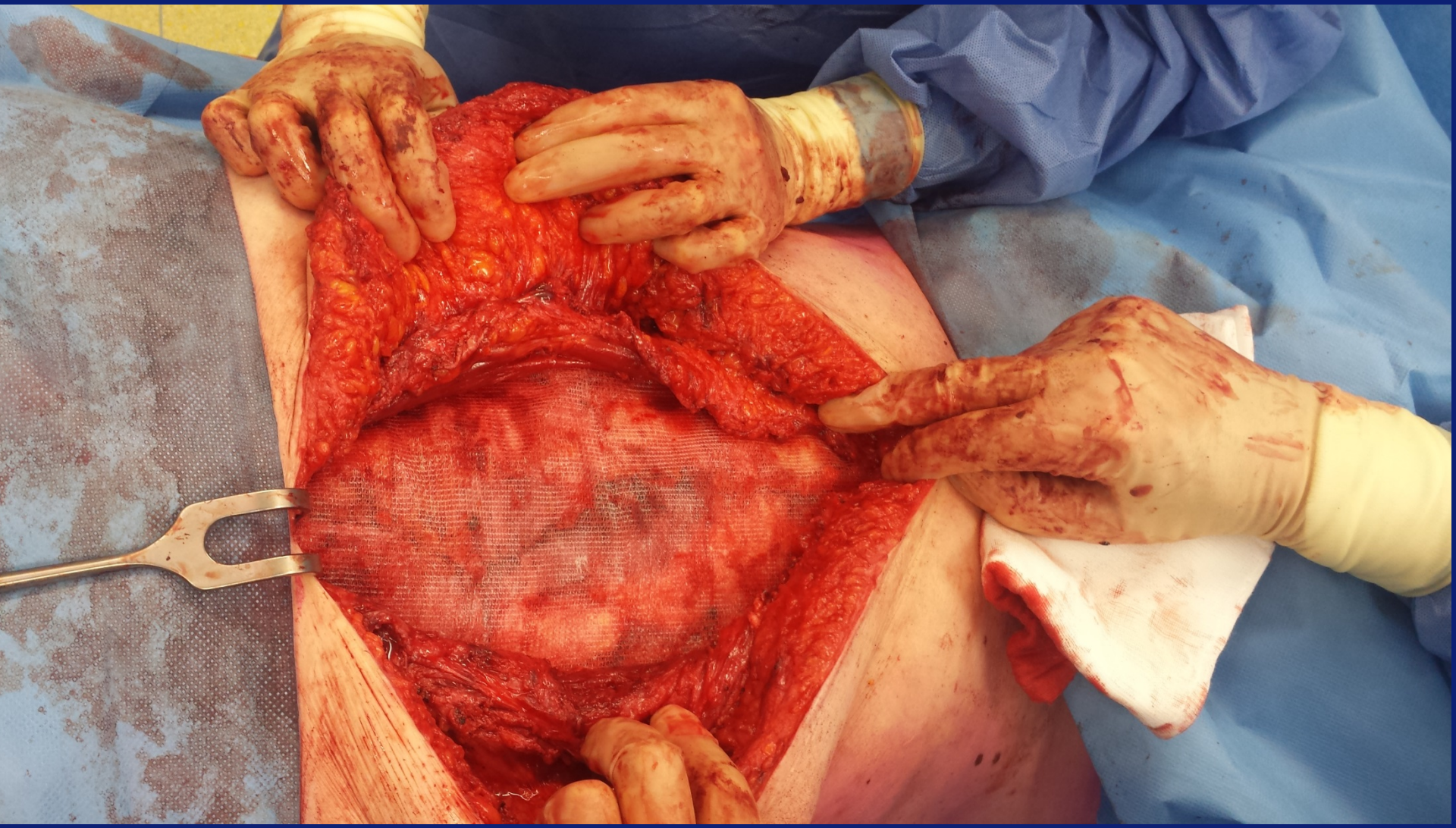
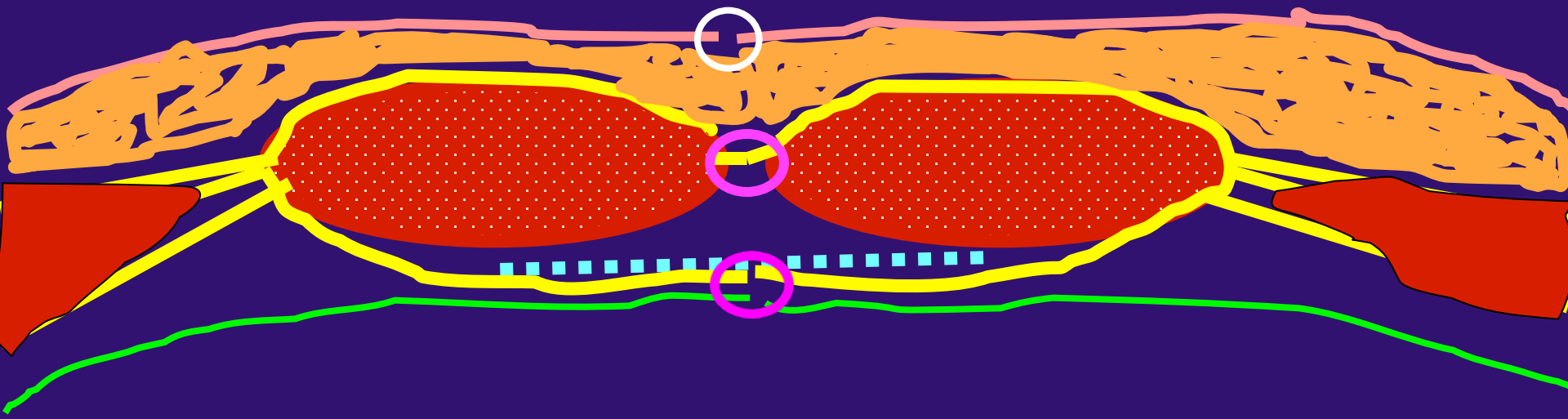


Rives-Stoppa technique
fermeture du plan antérieur (PDS (1) loop ou PDS 2x0)

Rives-Stoppa technique



Patients

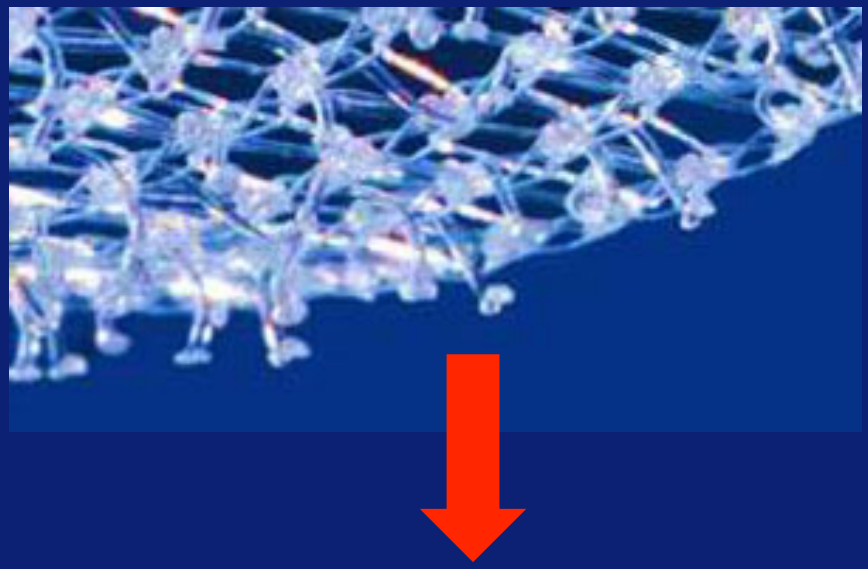
- Juin 2012 – Juin 2015

- Short term follow up: patient interview, physical examination
- Long term follow up: enquète: recurrence, complaints, pain (VAS), number of doctor's visits

Technique chirurgicale

- Rives-Stoppa
- (Modified Ramirez)

- crochets vers le bas



Technique chirurgicale

Type of procedure	
Rives-Stoppa	34 (73.9%)
Modified Ramirez	12 (26.1%)
Mesh size	
20*15 cm	17 (37%)
30*15 cm	26 (56.5%)
Other	3 (6.5%)
Drain placement	41 (89.1%)

Characteristiques des patients

Characteristic	Rives-Stoppa (n=34)	Ramirez (n=12)
Median age, years (IQR)	58 (42-64)	58 (41-63)
Male (%)	21 (61.8%)	7 (58.3%)
Median BMI (IQR)	26.76 (24.34-29.41)	28.87 (26.30-29.40)
Smoking (%)	12 (35.3%)	4 (33.3%)
Diabetes Mellitus (%)	2 (5.9%)	3 (25.0%)
ASA class I II III	 6 (17.6%) 26 (76.5%) 2 (5.9%)	 1 (8.3%) 10 (83.3%) 1 (8.3%)

Characteristiques des hernias

Hernia type	Rives-Stoppa	Ramirez
Incisional only (%)	25 (73.5%)	8 (66.7%)
Umbilical (%)	2 (5.9%)	1 (8.3%)
Epigastric (%)	1 (2.9%)	0 (0%)
Combination (%)	5 (14,7%)	3 (25%)
Rectus diastasis (%)	1 (2.9%)	0 (0%)
Multiple defects (%)	11 (32.4%)	3 (25%)
Recurrence after previous repair (%)	11 (32.4%)	2 (16.7%)
Complex hernia severity class[1]		
Minor	7 (20.6%)	2 (16.7%)
Moderate	26 (76.5%)	8 (66.7%)
Major	2 (5.9%)	1 (8.3%)
Defect size		
0 - 4.99 cm	10 (29.4%)	2 (16.7%)
5 - 9.99 cm	14 (41.2%)	2 (16.7%)
>10 cm	9 (26.5%)	8 (66.7%)
Unknown	1 (2.9%)	0 (0%)

[1]Slater et al. Hernia 2014

Résultats à court terme Rives-Stoppa (3 mois)

Median follow up time, weeks (IQR)	15 (7-17)
Median hospital stay, days (IQR)	5 (4-6)
Median # of outpatient clinic visits (IQR)	3 (2-3)
Seroma (%)	7 (20.6%) (1 punction required)
Wound infection (%)	2 (5.9%)
Pain (%) *Mild (%)* *Moderate (%)* *Severe (%)*	6 (17.6%) *3 (8.8%)* *2 (5.9%)* *1 (2.9%)*
Recurrence (%)	0 (0%)

Résultats à court terme Ramirez (3 mois)

Median follow up time, weeks (IQR)	12 (7-17)
Median hospital stay, days (IQR)	5.5 (4-7)
Median # of outpatient clinic visits (IQR)	5 (2-6)
Seroma (%)	3 (25%)
Wound infection (%)	2 (16.7%)
Pain (%) *Mild (%)* *Moderate (%)* *Severe (%)*	2 (16.7%) *0 (0%)* *2 (8.7%)* *0 (0%)*
Recurrence (%)	0 (0%)

Résultats à longue terme Rives-Stoppa (>1 an)

- 28 patients (6 lost to follow up)
- Median follow up period: 25 months (IQR 19-35)

Recurrence (%)	2 (7.1%)
Bulging (%)	0 (0%)
Mesh infection (%)	0 (0%)
Reoperation (%)	1 (3.6%)
Pain (%) *Mean VAS score (if >0)*	5 (17.9%) *1.2*
Mean number of doctor's visits (range)	1 (0-7)

Résultats à longue terme Ramirez (>1 an)

- 11 patients (1 lost to follow up)
- Median follow up period: 24 months (IQR 19-25)

Recurrence (%)	2 (18.2%)
Bulging (%)	1 (9.1%)
Mesh infection (%)	1 (9.1%)
Reoperation (%)	2 (18.2%)
Pain (%) *Mean VAS score (if >0)*	4 (33.3%) *1.75*
Mean number of doctor's visits (range)	3.8 (0-18)

Discussion

- Total recurrence rate: 7.1% for Rives-Stoppa, 18.2% for Ramirez
  - Literature: 0-34%[1-4]
  - Risk factors: recurrent hernia, hernia size >5cm, age>45, BMI>25

- This cohort:
  - 30% recurrent hernia procedures
  - Complex hernias
  - Large defects (71.7% > 5cm)
  - Median age 59
  - Median BMI 27.20

[1]*Hopson et al. Int J Surg 2016*
[2]*Dietz et al. Hernia 2014*
[3]*Krpata et al. Surgery 2013*
[4]*de Vries Reilingh et al. World J Surg 2007*

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Merci beaucoup pour votre attention!

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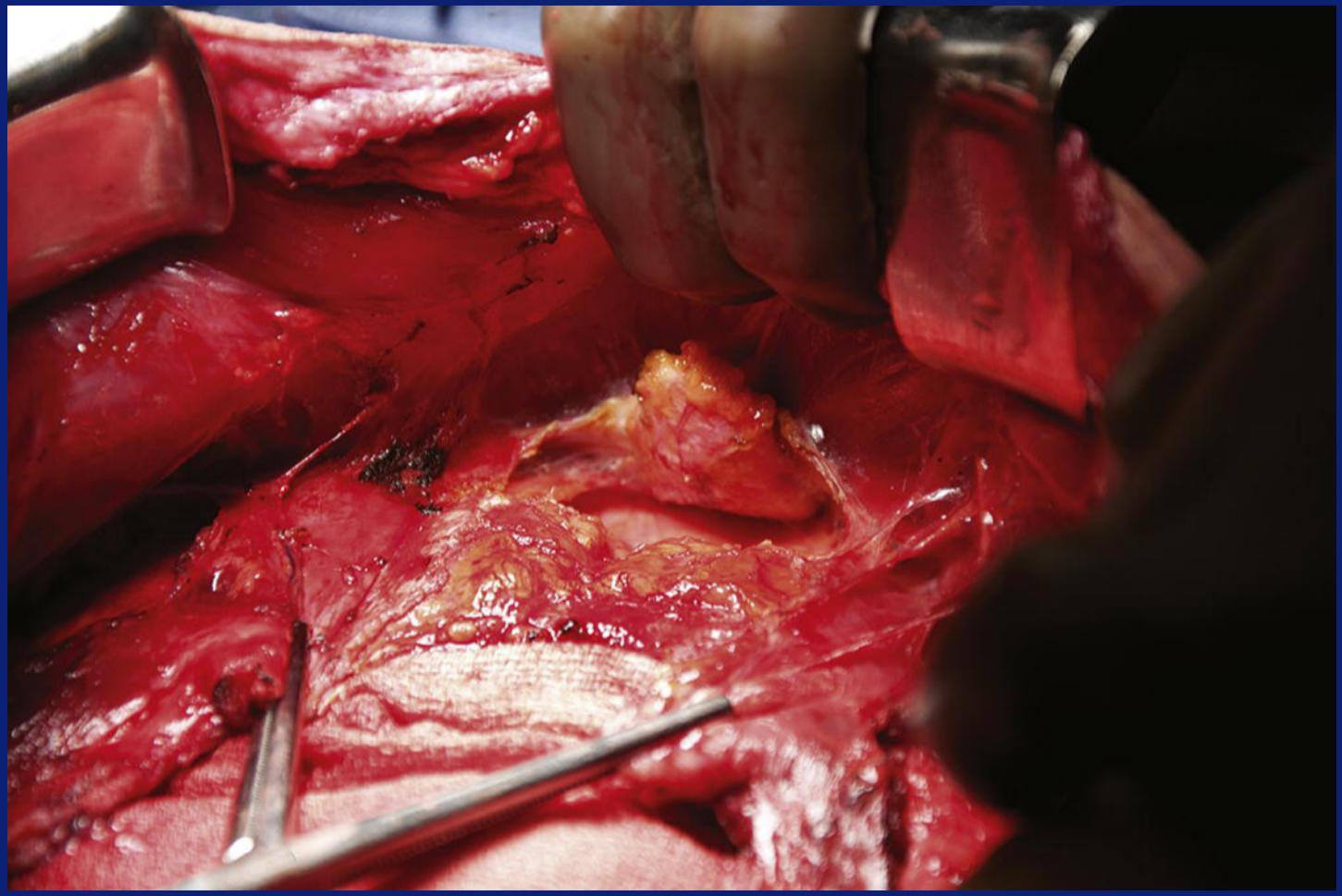

Récidives

Case 1 (Rives-Stoppa):

- Female, 63 years old
- BMI 26.95, not smoking
- Ovarium carcinoma, burst abdomen, laparoscopy for ileus
- Hernia size (incisional and umbilical): rectus diastasis 10cm, umbilical 3.8cm
- Recurrence after 19 months requiring reoperation

Case 2 (Ramirez):

- Female, 69 years old
- BMI 27.73, smoking
- Hysterectomy, EUG, cystopexy
- Hernia size: 13 cm
- Pseudobursa & recurrence after 17 months requiring reoperation

Récidives

Case 3 (Ramirez):

- Female, 46 years old
- BMI 30.02, smoking
- Wertheim procedure, cystectomy with Brickers deviation
- Hernia size (incisional and parastomal): 17cm
- Mesh infection after 4 months requiring explantation and permacol mesh, recurrent parastomal hernia after 21 months requiring reoperation