

Progrès dans les Techniques Opératoires des MICI.

Paris Yves

Service de Chirurgie Colorectale, Pôle des Maladies de l'Appareil Digestif (PMAD)

Hôpital Beaujon et Université Paris VII, Clichy, France.



CONFLITS D'INTÉRÊT

Aucun

Objectifs pédagogiques

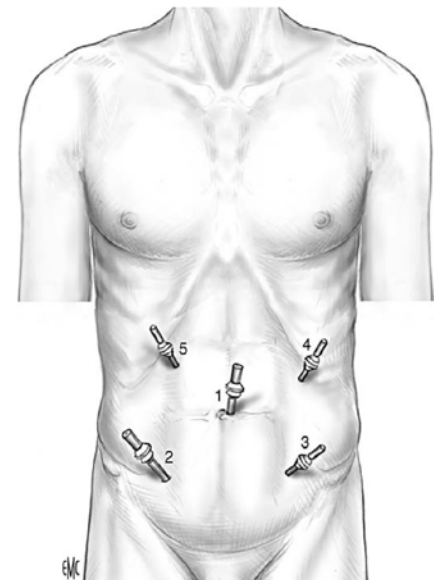
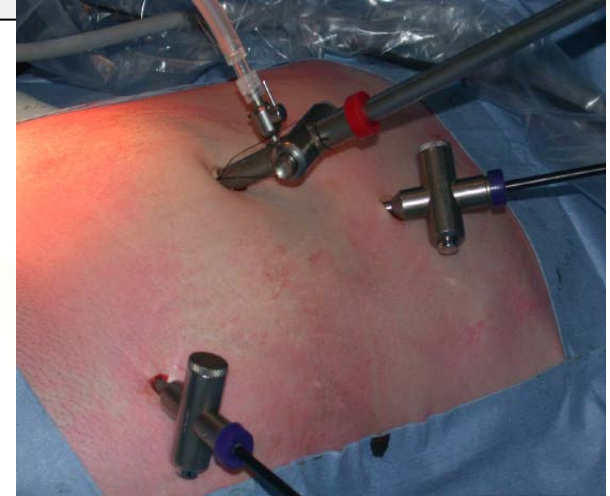
- **Quelles nouveautés dans les techniques opératoires ?**
 - Laparoscopie, trocard unique, etc...
 - A qui les proposer ?
- **Quelles sont les compétences requises ?**
- **Quels avantages pour le chirurgien ?**
- **Quels sont les résultats évalués en pratique clinique ?**
 - Complications; rechute
 - Aspect cosmétique; etc...

Avant avec la laparotomie...

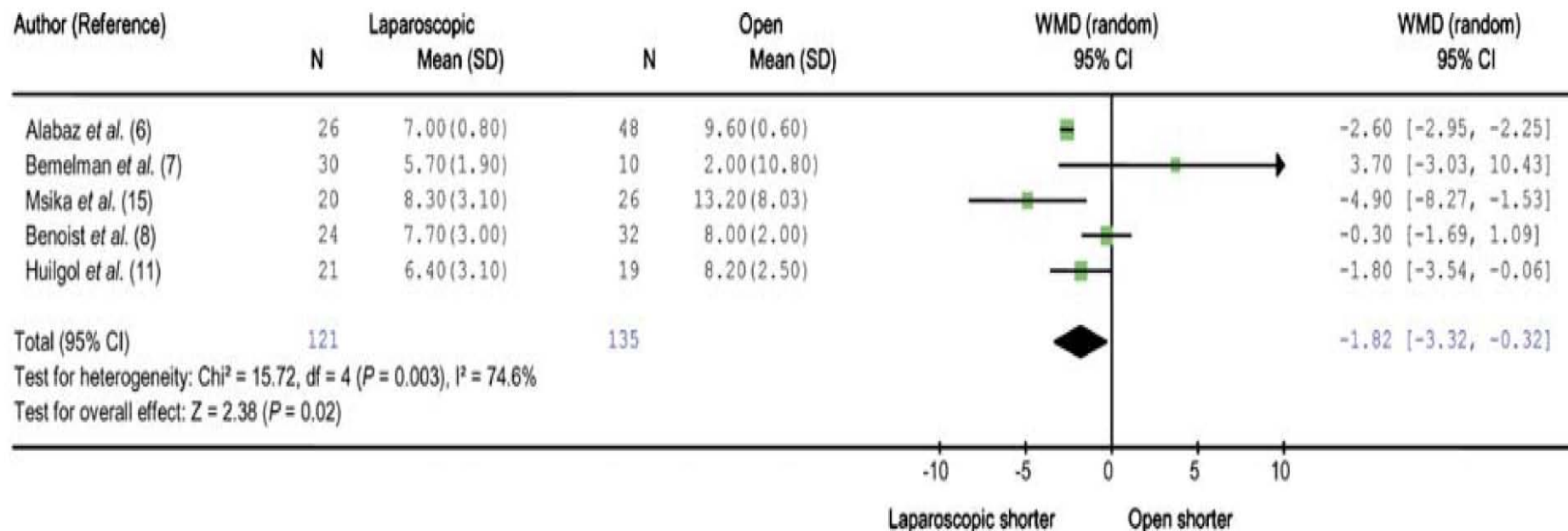


...aujourd'hui avec la Laparoscopie

- Voie d'abord idéale ...
 - Maladie bénigne,
 - Malades souvent jeunes,
 - Risque de chirurgie itérative.
- ... mais difficile ? :
 - Lésions inflammatoires, maladie fistulisante,
 - Malades dénutris, immunodéprimés.
- La 1^{ère} indication:
 - Résection iléocaecale pour Crohn
(+++)



Réduction significative de l'hospitalisation avec la laparoscopie (-2 jours)



SD standard deviation; WMD weighted mean difference; 95% CI 95 percent confidence interval; % percent

Figure 3. Duration of hospitalization (days). SD=standard deviation; WMD=weighted mean difference; 95 percent

Laparoscopic Surgery for Crohn's Disease: A Meta-Analysis

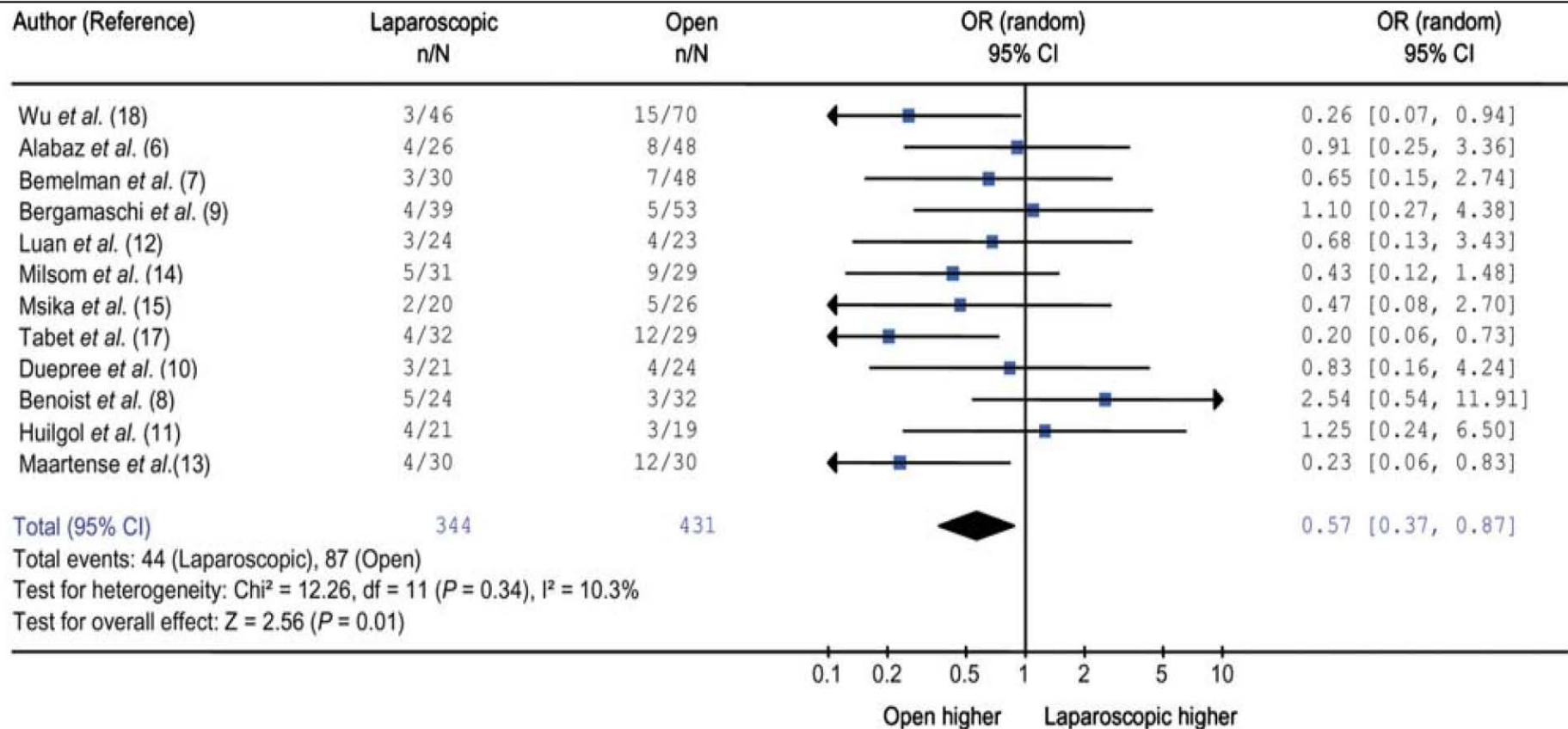
Jane J. Y. Tan, M.B.B.S., M.R.C.S., Joe J. Tjandra, M.D., F.R.A.C.S.

Department of Colorectal Surgery, Royal Melbourne Hospital and Epworth Colorectal Centre, Melbourne, Australia

Dis Colon rectum 2007

Réduction significative de la morbidité avec la laparoscopie

(12,8% vs 20,2%, OR = 0,57 [IC95%: 0,37-0,87], p=0,001)



n/N number of events relative to the number of patients in either laparoscopic or open surgery group; OR odds ratio; 95% CI 95 percent confidence interval; % percent

Figure 4. Morbidity. n/N= number of events relative to the number of patients in laparoscopic or open surgery group; OR= odds ratio; 95 percent CI = 95 percent confidence interval; % = percent.

Long-term outcomes following laparoscopically assisted versus open ileocolic resection for Crohn's disease

British Journal of Surgery 2010; **97**: 563–568

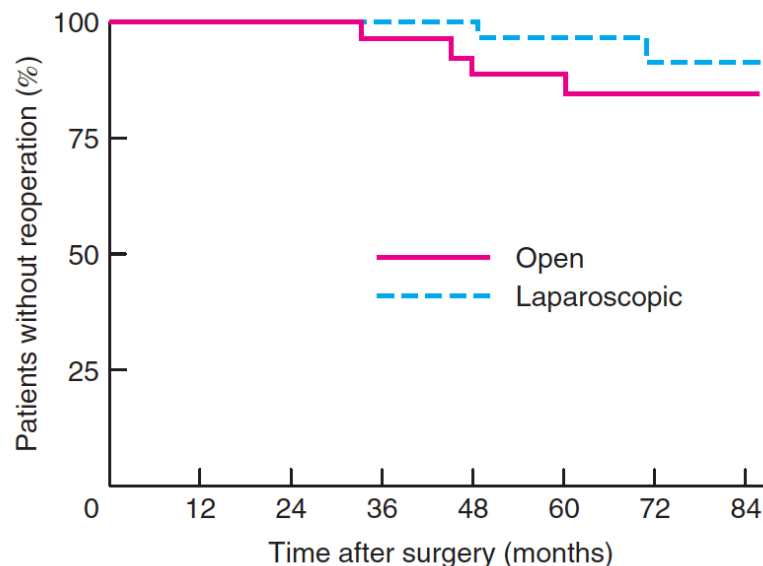
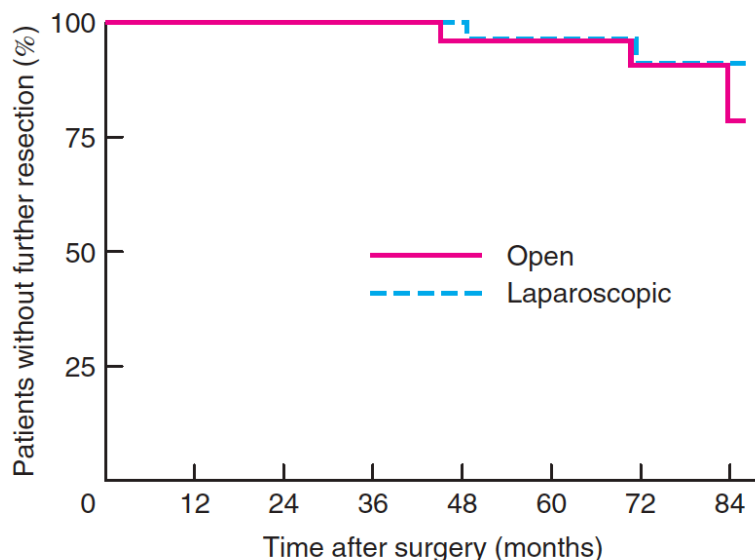


Table 3 Overall reoperation rate for 55 patients with complete follow-up

	Open (n = 26)	Laparoscopic (n = 29)	Risk difference (%)
Incisional hernia requiring surgery	2	0	8 (–3 to 18)
Adhesions requiring surgery	1	0	4 (–4 to 11)
Intestinal recurrence requiring resection	3	2	5 (–11 to 20)
Overall no. reoperated	6	2	16 (–3 to 35)

A laparoscopic approach reduces short-term complications and length of stay following ileocolic resection in Crohn's disease: an analysis of outcomes from the NSQIP database

Y. Lee*, F. J. Fleming*, A.-P. Deeb*, D. Gunzler†, S. Messing† and J. R. T. Monson*

*Division of Colorectal Surgery, University of Rochester Medical Center, Rochester, New York, USA and †Department of Biostatistics and Computational Biology, University of Rochester Medical Center, Rochester, New York, USA

Table 3 Adjusted (multivariate) analysis of factors associated with major and minor complications.

	Major complications	Minor complications
Laparoscopic <i>vs</i> open approach	0.629 (0.430 – 0.905) [0.0145]	0.576 (0.405 – 0.804) [0.0016]
Male <i>vs</i> female	1.420 (1.046 – 1.931) [0.0249]	1.343 (1.011 – 1.787) [0.0419]
Functional status: dependent <i>vs</i> independent	2.311 (1.137 – 4.537) [0.0171]	–
Intra-operative blood transfusion	2.275 (1.314 – 3.869) [0.0028]	3.028 (1.832 – 4.925) [< 0.0001]
Preoperative systemic sepsis	1.840 (1.113 – 2.988) [0.0153]	–
Steroid use within one month of surgery	1.377 (1.010 – 1.874) [0.0421]	–
ASA class III/IV/V	–	1.495 (1.093 – 2.035) [0.011]

Data are given as OR (95% CI) [*P*-value].

ASA, American Society of Anesthesiology.

Consensus ECCO (2010)

ECCO Statement 7F

A laparoscopic approach is to be preferred for ileocolonic resections in Crohn's disease [EL 2A, RG B] where appropriate expertise is available. In more complex cases or recurrent resection, there is insufficient evidence to recommend laparoscopic surgery as the technique of first choice [EL3, RG C].

Impact of Complex Crohn's Disease on the Outcome of Laparoscopic Ileocecal Resection: A Comparative Clinical Study in 124 Patients

Perrine Goyer, M.D.¹ • Arnaud Alves, M.D., Ph.D.¹ • Frédéric Bretagnol, M.D.¹
Yoram Bouhnik, M.D., Ph.D.² • Patrice Valleur, M.D.³ • Yves Panis, M.D., Ph.D.¹

TABLE 2. Postoperative outcomes in 124 patients undergoing laparoscopic ileocolonic resection for Crohn's disease

Outcomes	Group I (n = 54)	Group II (n = 70)	P value
Conversion rate, n (%)	20 (37)	10 (14)	<0.01
Associated surgical procedures, n (%)	19 (35)	12 (17)	NS
Intraoperative injury, n (%)	5 (9)	3 (4)	NS
Blood transfusion, n (%)	2 (4)	4 (6)	NS
Mean operating time, min, (SD, range)	214 (73, 80–450)	191 (53, 100–340)	<0.05
Intestinal resection with temporary stoma, n (%)	21 (39)	6 (9)	<0.001
Death	0	0	NS
Overall morbidity, n (%)	9 (17)	12 (17)	NS
Major postoperative complications, n (%)	4 (7)	4 (6)	NS
Reoperation	0	3	
Intra-abdominal abscess	4	2	
Anastomotic bleeding requiring red blood transfusion	0	2	
Minor postoperative complications, n (%)			NS
Wound infection	1	3	
Ileus	2	5	
Urinary tract infection	2	2	
Pneumopathy	0	1	
Mean hospital stay, days (SD, range)	8 (3, 4–15)	7 (3, 4–18)	NS

Group I: patients with complex Crohn's disease; Group II: patients without complex Crohn's disease.

A laparoscopic approach to iterative ileocolonic resection for the recurrence of Crohn's disease

Antoine Brouquet · Frederic Bretagnol · Antoine Soprani ·
Patrice Valleur · Yoram Bouhnik · Yves Panis

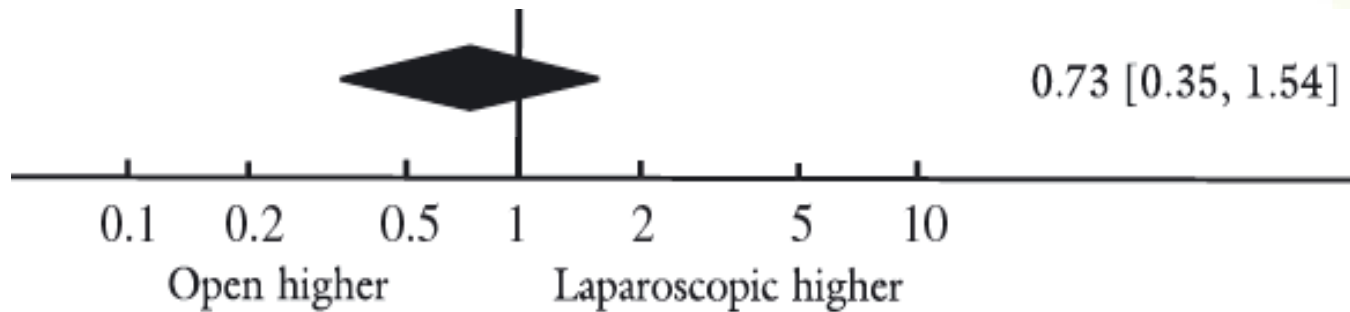
Surg Endosc (2010) 24:879–887

Table 3 Intraoperative characteristics and postoperative outcome for 29 laparoscopic vs. 33 open ileocolonic resections to manage Crohn's disease recurrence

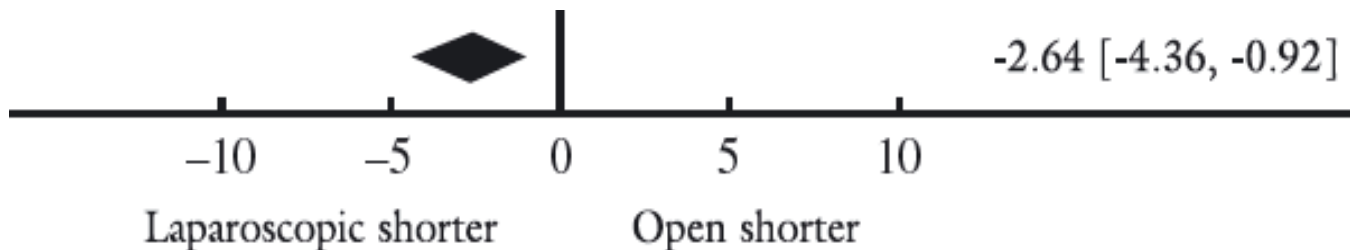
Operations	Laparoscopy group (n = 29) n (%)	Open group (n = 33) n (%)	p Value
Intraoperative findings			
Peritoneal adhesion	12	17	0.425
Abscess alone	2	1	0.299
Enteric fistula alone	4	8	0.595
Abscess or fistula	7	11	0.426
Synchronous procedures			
Small bowel disease	2	17	0.003
Strictureplasty	2	5	0.533
Resection	0	5	0.055
Strictureplasty and resection	0	3	0.24
Sigmoid colonic disease	0	2	0.493
Strictureplasty	0	2	0.493
Intraoperative intestinal injuries	5	0	0.018
Blood pack transfusion requirement	1	2	0.632
Temporary defunctioning stoma	7/29 (24)	6/33 (18)	0.783
Conversion to laparotomy	9/29 (31)	—	—
Mean operating time (min)	215 ± 70	226 ± 106	0.516
Mortality	0	0	—
Morbidity	11 (38)	10 (30)	0.924
Severe complications (DINDO ≥3)	3 (10)	5 (15)	0.854
Postoperative complications			
Anastomotic leak	1/22	2/27	0.523
Intraabdominal abscess	4/29	5/33	0.971
Intraabdominal hemorrhage	1	1	0.926
Gastrointestinal bleeding	1	1	0.926
Small bowel obstruction	2	2	0.894
Wound infection	2	4	0.752
Percutaneous drainage of abscess	2	4	0.752
Reoperation	2	2	0.894
Median postoperative stay: days (range)	9 (6–63)	9 (6–44)	0.832

INTRODUCTION

LAPAROSCOPIE ET RCH

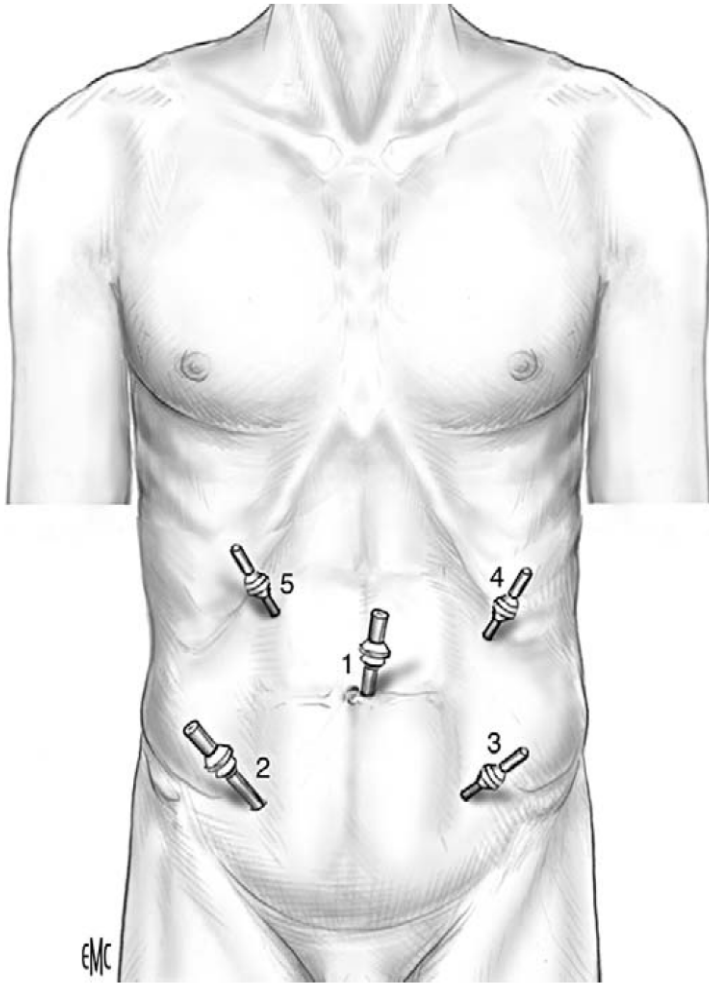


↳ Pas de différence de morbidité postopératoire

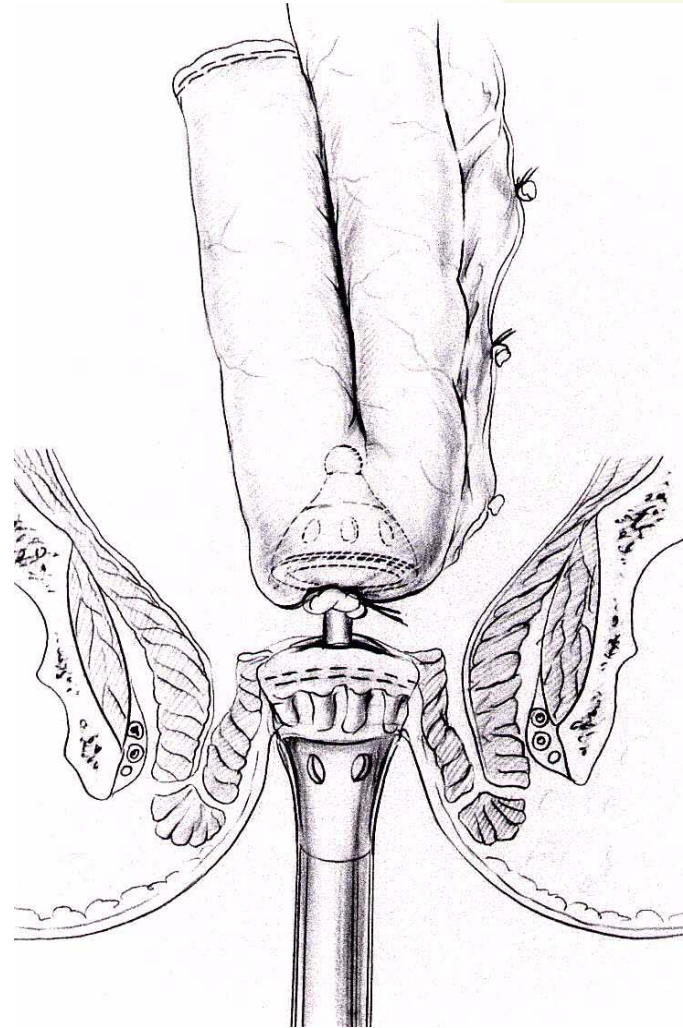


↳ Durée d'hospitalisation réduite

Anastomose iléo-anale laparoscopique



5 trocars
(extraction de la pièce au site de la stomie)



Anastomose mécanique

Laparoscopie vs laparotomie: méta-analyse

Table 4 Effect of subgroup analysis on meta-analysis comparing laparoscopic versus open restorative proctocolectomy

Outcome of interest	No. studies	No. patients	OR/WMD	95% CI	<i>p</i>	HG χ^2	HG <i>p</i>
High-quality studies							
Operative time	5	199	93.09	52.53, 133.64	<0.001	44.46	<0.001
Operative blood loss	2	100	-64.81	-155.57, 25.94	0.16	0.45	0.50
Time to resumption of normal diet	4	159	-0.81	-1.43, -0.20	0.009	2.43	0.49
Length of stay	5	199	-1.05	-1.94, -0.16	0.02	4.45	0.35
Studies published since/including 2001							
Operative time	6	187	78.23	38.61, 117.85	<0.001	39.46	<0.001
Operative blood loss	4	130	-81.83	-133.59, -30.06	0.002	2.96	0.40
Time to resumption of normal diet	5	155	-1.41	-2.86, 0.03	0.06	23.80	<0.001
Length of stay	6	187	-2.96	-4.98, -0.95	0.004	15.69	0.008
Studies reporting on more than 30 patients							
Operative time	5	206	103.38	76.96, 129.81	<0.001	11.97	0.02
Operative blood loss	3	132	-50.05	-124.38, 24.27	0.19	0.76	0.68
Time to resumption of normal diet	3	134	-0.93	-1.57, -0.29	0.004	0.86	0.65
Length of stay	5	206	-1.12	-2.06, -0.19	0.02	4.29	0.37
Studies with randomised/matched patients							
Operative time	5	188	108.77	89.43, 128.11	<0.001	8.04	0.09
Operative blood loss	3	114	-87.64	-141.3, -33.86	0.001	0.82	0.66
Time to resumption of normal diet	4	148	-1.78	-3.34, -0.22	0.03	20.82	<0.001
Length of stay	5	188	-2.03	-4.02, -0.04	0.05	26.94	<0.001

Second European evidence-based Consensus on the diagnosis and management of ulcerative colitis: Current management

Axel Dignass ^{*,1,2,3}, James O. Lindsay ^{1,3}, Andreas Sturm ³, Alastair Windsor ³, Jean-Frederic Colombel ³, Mathieu Allez ³, Gert D'Haens ³, André D'Hoore ³, Gerassimos Mantzaris ³, Gottfried Novacek ³, Tom Öresland ³, Walter Reinisch ³, Miquel Sans ³, Eduard Stange ³, Severine Vermeire ³, Simon Travis ³, Gert Van Assche ^{**,2,3}

ECCO Statement 7R

Laparoscopic restorative proctocolectomy with an IPAA is a technically demanding but feasible operation. Aside from cosmesis there is no evidence for additional benefit to the patient [EL 2a, RG B]

A Laparoscopic Approach Does Reduce Short-Term Complications in Patients Undergoing Ileal Pouch-Anal Anastomosis

Fergal J. Fleming, M.D.¹ • Todd D. Francone, M.D.¹ • Michael J. Kim, M.D.¹
Douglas Gunzler, M.A.² • Susan Messing, M.S.² • John R. T. Monson, M.D.¹

Dis Colon Rectum 2011; 54: 176–182

TABLE 3. Adjusted (multivariate) analysis of factors associated with major and minor complications

	OR (95% CI) [P value]	
	Major complications	Minor complications
Laparoscopic vs open approach	0.67 (0.45–0.99) [.04]	0.44 (0.27–0.70) [.01]
Male vs female	—	0.45 (0.28–0.71) [.01]
Operative indication (FAP vs UC)	0.43 (0.18–0.90) [.04]	—
Intraoperative blood transfusion	2.43 (1.22–4.76) [.01]	—
Cardiac comorbidity	1.74 (1.05–2.83) [.03]	—

FAP = familial adenomatous polyposis; UC = ulcerative colitis.

Adhesions after laparoscopic and open ileal pouch–anal anastomosis surgery for ulcerative colitis

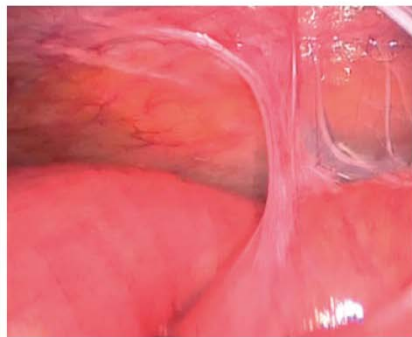
T. L. Hull, M. R. Joyce, D. P. Geisler and J. C. Coffey



a Grade 0



b Grade 1



c Grade 2



d Grade 3

	Two-stage surgery	Three-stage surgery	<i>P</i> †
Laparoscopic surgery	<i>n</i> = 14	<i>n</i> = 14	
Incisional adhesion score	0 (0–5)	1 (0–4)	0.957
Total abdominal adhesion score	2.5 (0–5)	2 (0–6)	0.929
Open surgery	<i>n</i> = 5	<i>n</i> = 7	
Incisional adhesion score	4 (2–6)	6 (4–6)	0.109
Total abdominal adhesion score	6 (2–9)	8.5 (8–10)	0.068

	Laparoscopic (<i>n</i> = 28)	Open (<i>n</i> = 12)	<i>P</i> †
Age (years)*	38 (20–61)	37 (22–46)	0.655
Sex ratio (F : M)	15 : 13	4 : 8	0.570‡
Time to stoma closure (weeks)*	12 (7–21)	12 (8–14)	0.892
Incisional adhesion score (0–6)*	0 (0–5)	4 (2–6)	0.004
Total abdominal adhesion score (0–10)*	2 (0–6)	8 (2–10)	0.002

- Diminution de la fertilité après AIA faite par laparotomie:
 - 3 méta-analyses concordantes

Méta-analyses	Année	Patientes incluses, n	Âge op, années	Etiologie	Données	Patientes + essai grossesse, n	Définition	Infertilité, %	Comparaison
Waljee	2006	481	-	RCH + PAF	-	np	Infertilité globale	48%	RR=3.2 / PG
Cornish	2007	662	-	RCH + PAF	-	np	Infertilité globale	43%	-
Rajaratnam	2011	1076	-	RCH + PAF	-	457	Infertilité globale	63%	RR=3.9 / PG

- Mais pas d'étude sur la fertilité après laparoscopie (+++)

Waljee, *et al.* Gut. 2006; 55 (11): 1575-80.
 Cornish, *et al.* Dis Colon Rectum. 2007; 50 (8): 1128-38.
 Rajaratnam, *et al.* Int J Colorectal Dis. 2011 (sous presse).
 Slama, *et al.* Agence Nationale de Recherche. 2009.

Significantly Increased Pregnancy Rates After Laparoscopic Restorative Proctocolectomy

A Cross-Sectional Study

Sanne A. L. Bartels, MD,* André D'Hoore, MD, PhD,† Miguel A. Cuesta, MD, PhD,‡ Alexandra J. Bensdorp, MD,§ Cees Lucas, PhD,|| and Willem A. Bemelman, MD, PhD*

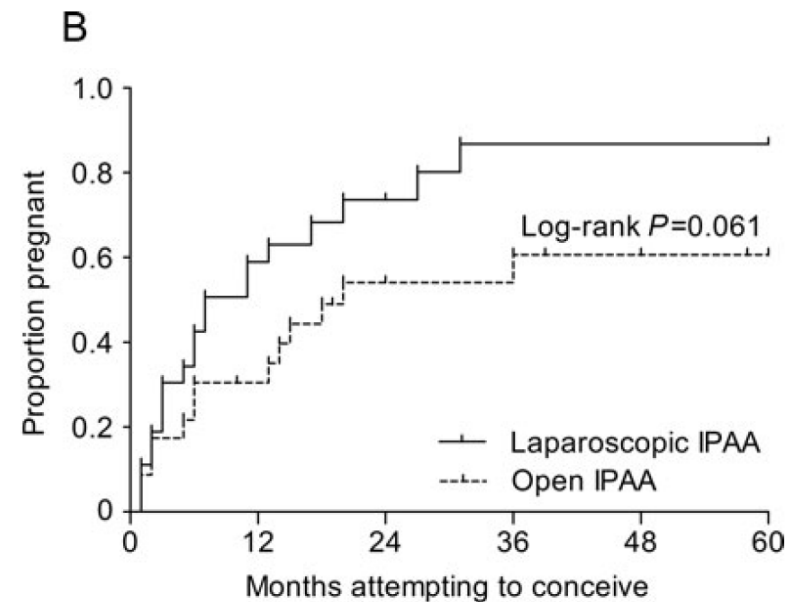
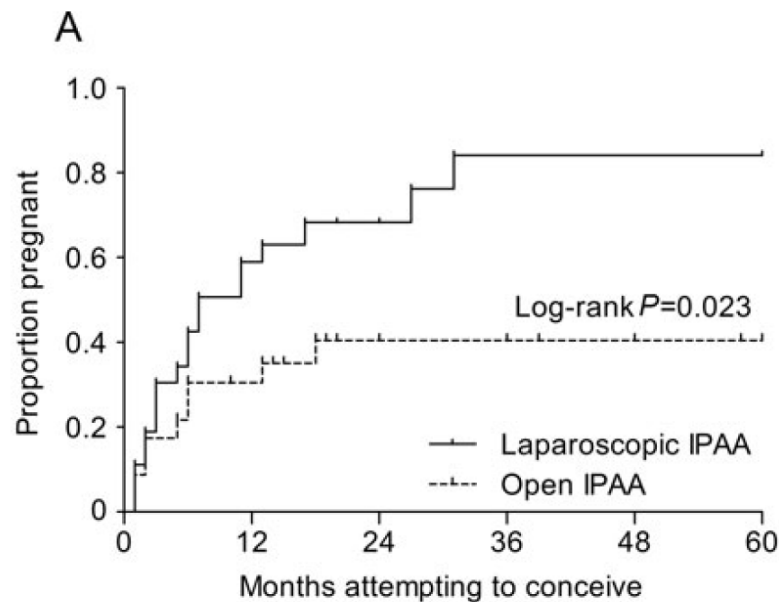


FIGURE 2. Kaplan-Meier estimates of time to spontaneous pregnancy (A) and time to any pregnancy, including in vitro fertilization (B) treated by laparoscopic and open IPAA.

A Total Laparoscopic Approach Reduces the Infertility Rate After Ileal Pouch-Anal Anastomosis

A 2-Center Study

Laura Beyer, MD,† Léon Maggiori, MD,* David Birnbaum, MD,† Jérémie H. Lefevre, MD,* Stéphane Berdah, MD, PhD,† and Yves Panis, MD, PhD**

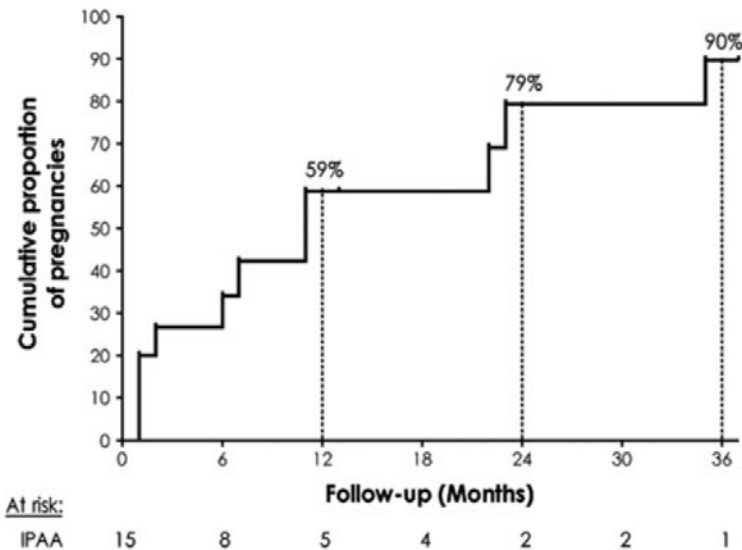


FIGURE 2. Time until pregnancy in 15 women attempting pregnancy after undergoing laparoscopic IPAA (Kaplan-Meier).

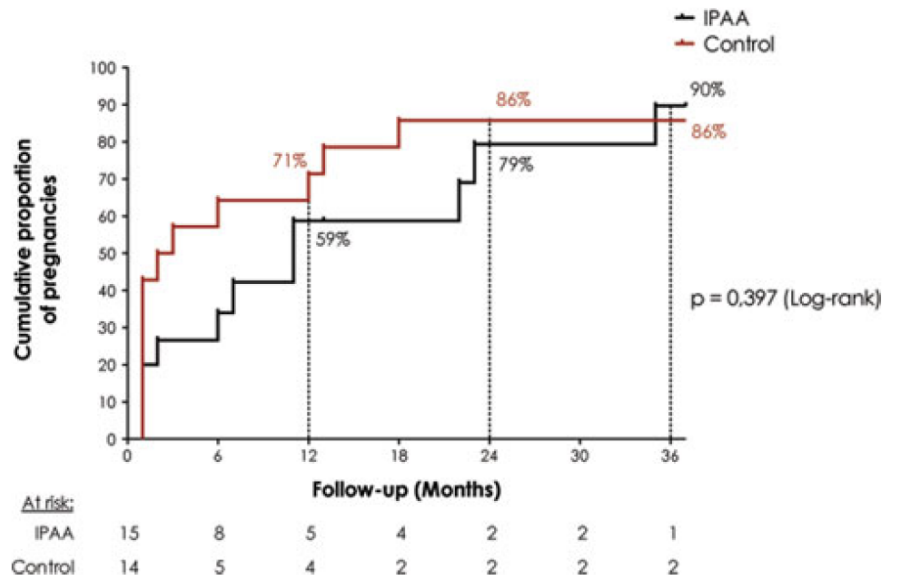
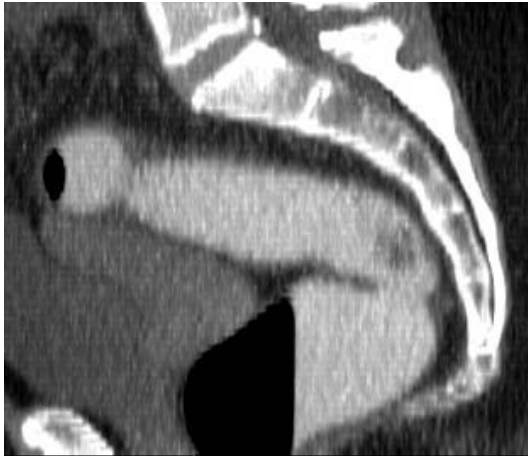


FIGURE 3. Time until pregnancy in 15 women attempting pregnancy after undergoing laparoscopic IPAA compared with 14 controls who underwent laparoscopic appendectomy (Kaplan-Meier).

2 solutions pour préserver la fertilité dans la RCH opérée



- Faire une iléorectale au lieu d'une iléo-anale:
 - Impossible dans 80% des cas:
 - Microrectum; dysplasie ou cancer
 - À discuter si rectum peu malade chez la femme jeune sans enfant



- **Faire une iléo-anale par laparoscopie (+++)**
 - Diminue beaucoup moins la fertilité que la laparotomie

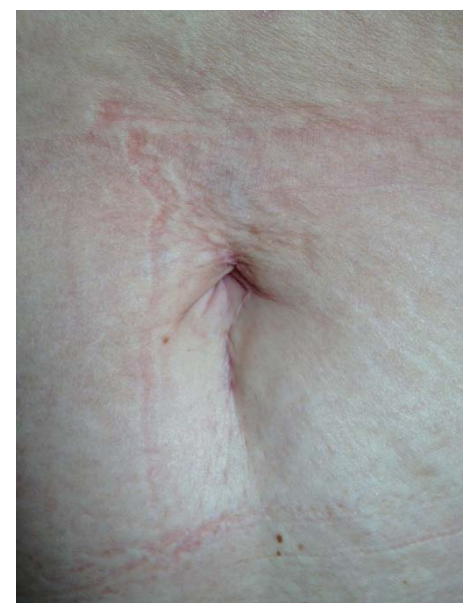
Chirurgie à trocart unique



Fig. 1 Trocars placed through the Gelport®



Fig. 3 Specimen delivered through periumbilical wound



Single-incision laparoscopy for colorectal resection: a systematic review and meta-analysis of more than a thousand procedures

L. Maggiori, S. Gaujoux, E. Tribillon, F. Bretagnol and Y. Panis

Department of Colorectal Surgery, Beaujon Hospital, Assistance Publique Hôpitaux de Paris (AP-HP), University Denis Diderot (Paris VII), Clichy, France

Colorectal Disease © 2012 The Association of Coloproctology of Great Britain and Ireland. **14**, e643–e654

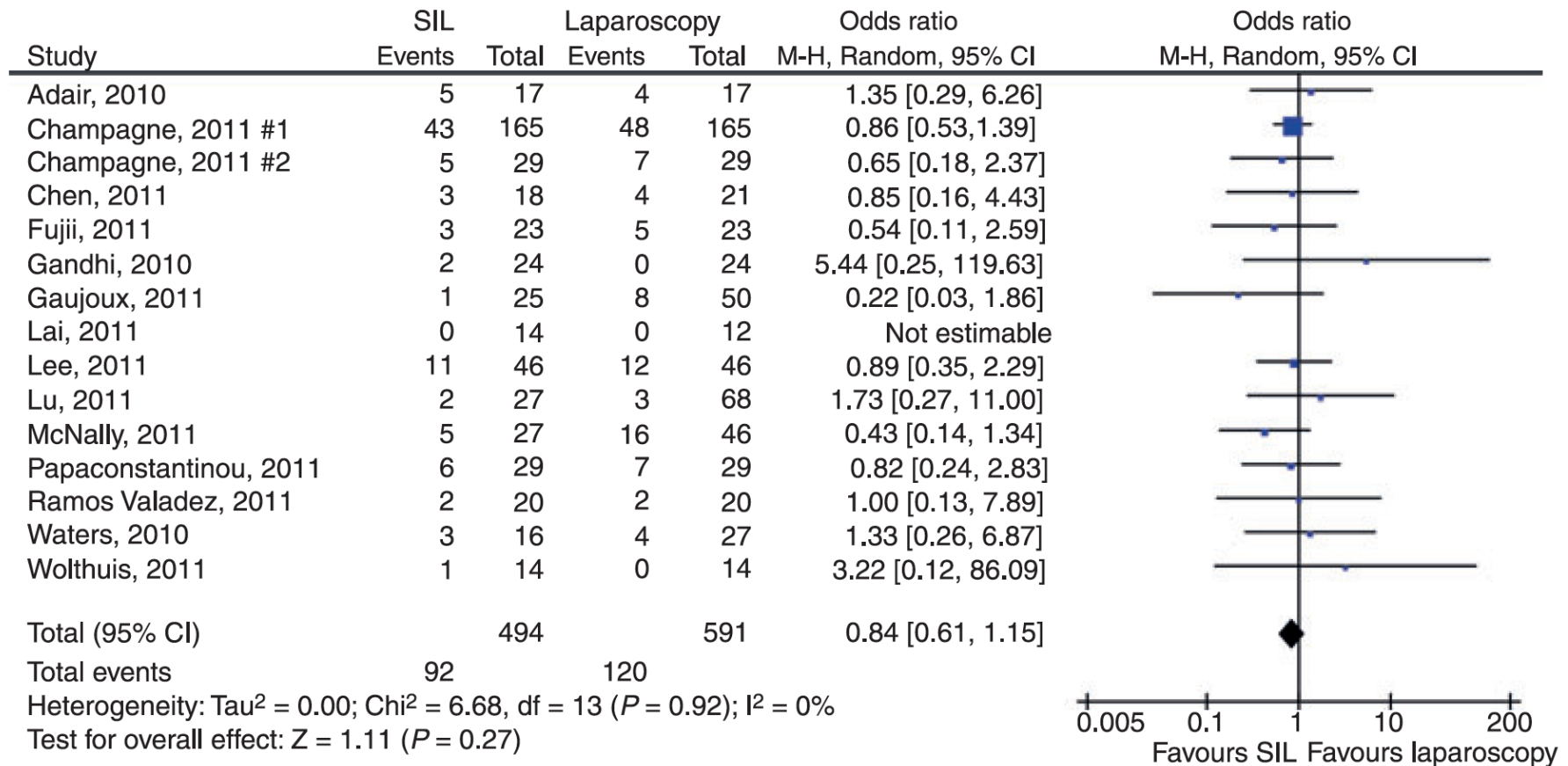


Figure 4 Meta-analysis of comparative studies reporting single-port laparoscopic surgery (SIL) for colorectal resection: postoperative morbidity

Morbidité Postopératoire

Durée d'Hospitalisation

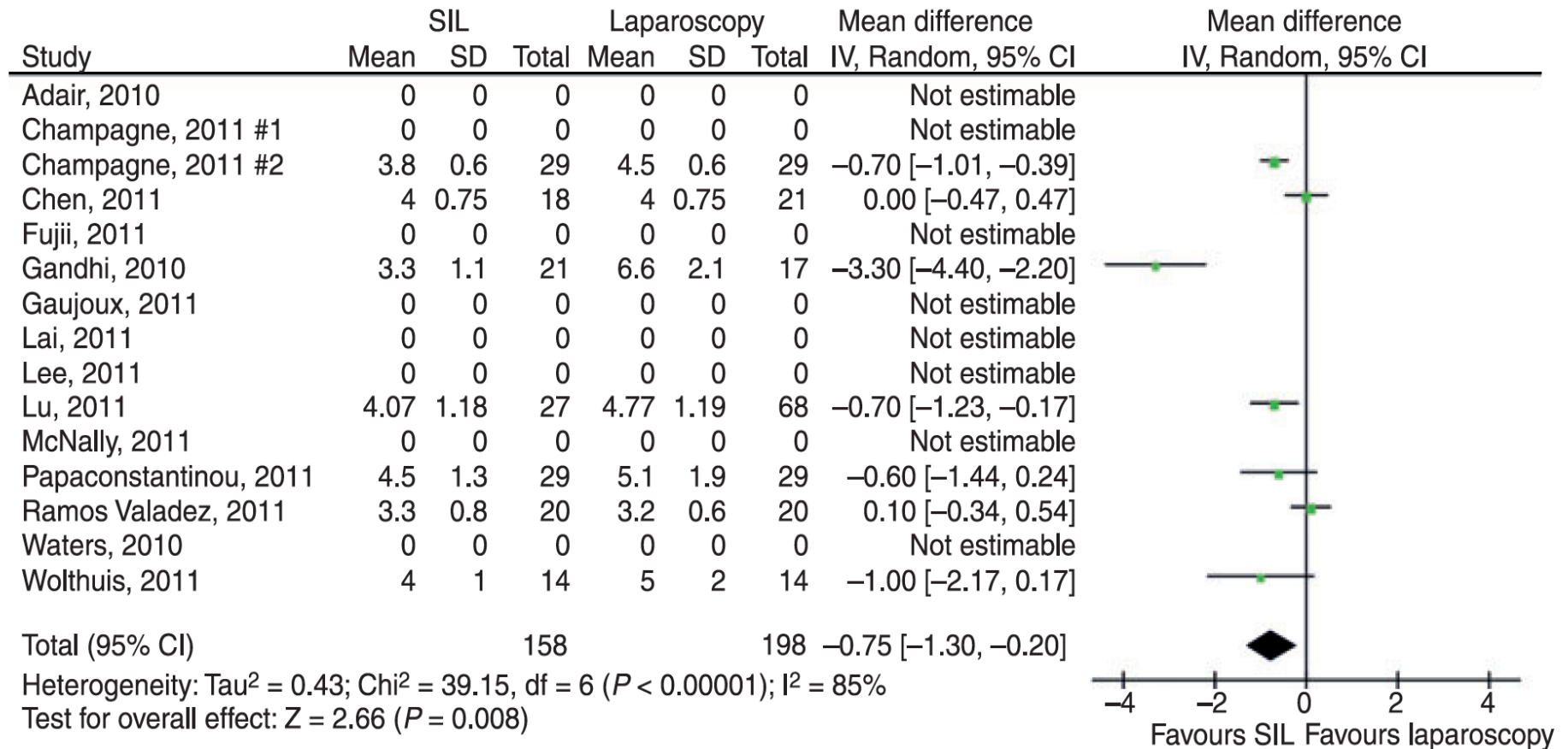


Figure 6 Meta-analysis of comparative studies reporting single-port laparoscopic surgery (SIL) for colorectal resection, length of stay (days).

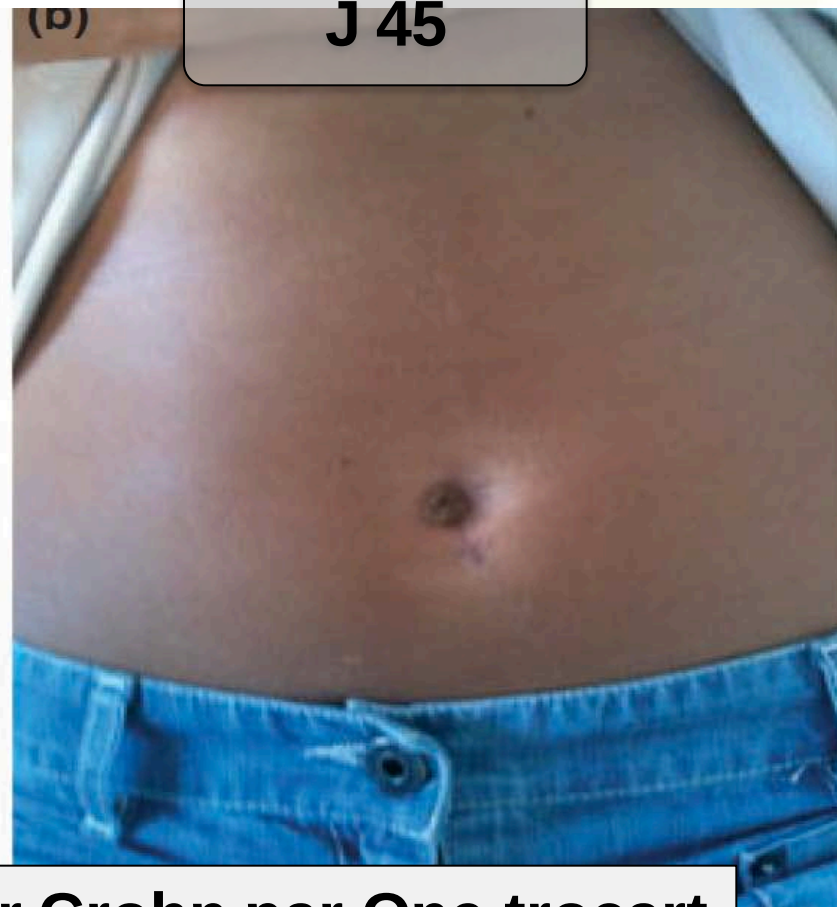
Chirurgie à Trocart Unique

Un excellent résultat cosmétique

J 7

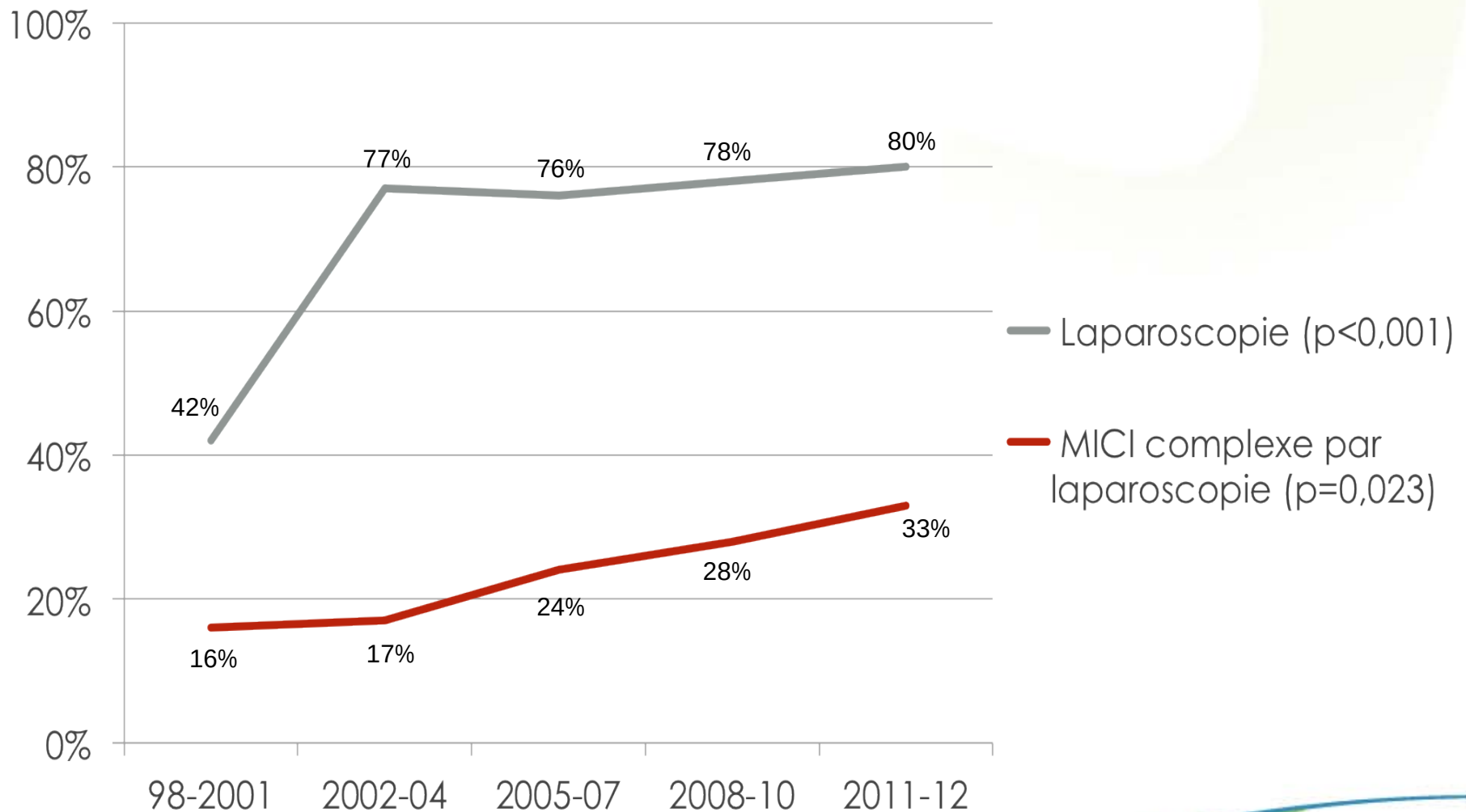


J 45

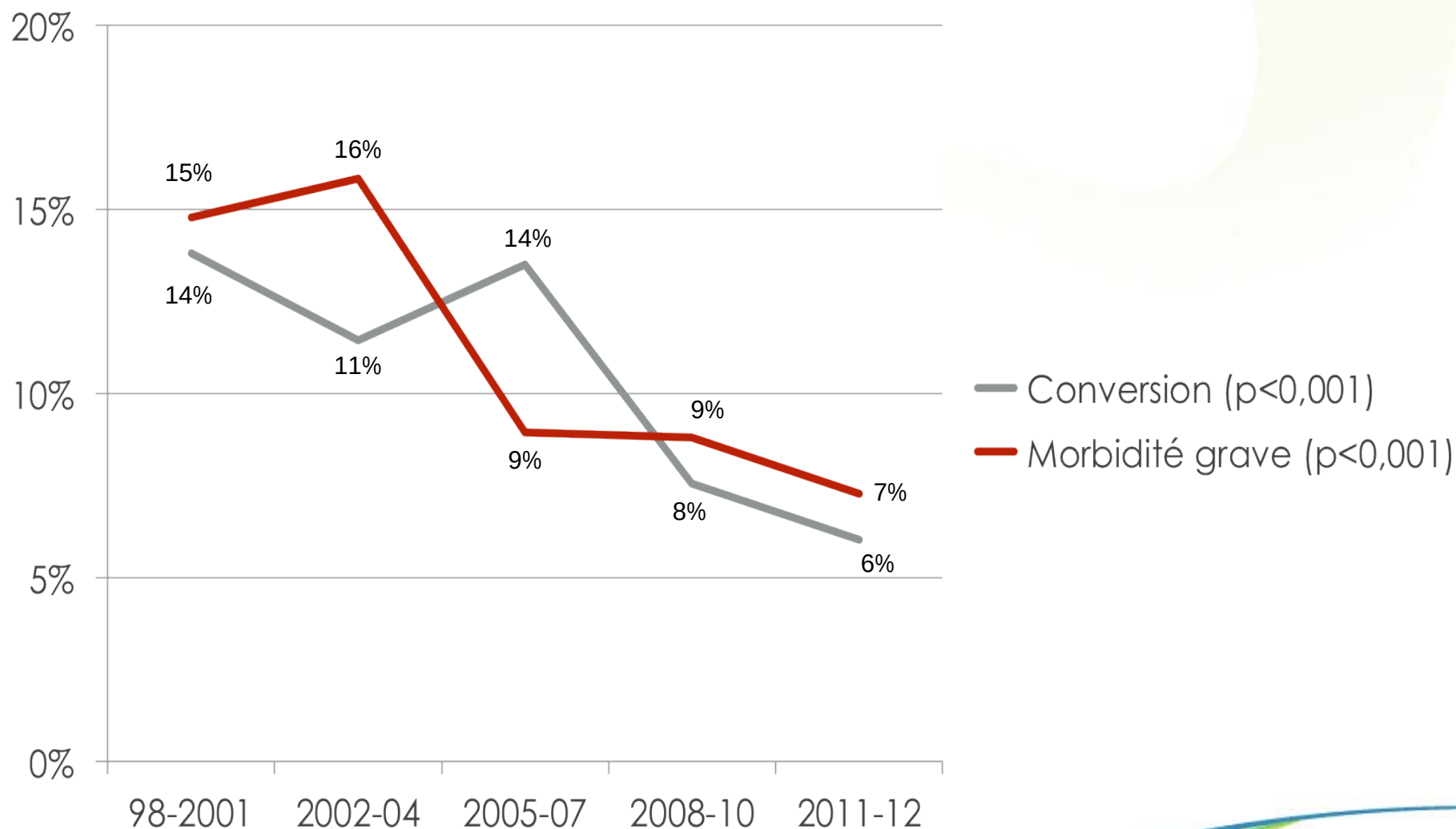


Anastomose Iléorectale pour Crohn par One trocart

L'expérience de Beaujon dans la chirurgie des MICI sur 790 interventions.



L'expérience de Beaujon dans la chirurgie des MICI sur 574 laparoscopies.



Surgical management of IBD—from an open to a laparoscopic approach

Léon Maggiori and Yves Panis

NATURE REVIEWS | GASTROENTEROLOGY & HEPATOLOGY

Small bowel Crohn's disease (stricturing)

- Similar or reduced morbidity
- Shorter postoperative recovery
- Shorter length of hospital stay
- Lower overall cost
- Similar recurrence rate
- Fewer small bowel obstructions
- Fewer postoperative hernias
- Better cosmetic results

Small bowel Crohn's disease (penetrating or recurrent)

- Similar morbidity
- Similar length of hospital stay
- High risk of conversion

Surgical management of IBD—from an open to a laparoscopic approach

Léon Maggiori and Yves Panis

NATURE REVIEWS | GASTROENTEROLOGY & HEPATOLOGY

Colorectal IBD (IPAA for ulcerative colitis)

- Similar or reduced morbidity
- Shorter postoperative recovery
- Shorter length of hospital stay
- Similar functional outcomes
- Fewer small bowel obstructions
- Similar or increased fecundity

En 2013, La laparoscopie doit être la technique de choix pour la chirurgie des MICI