Séminaire
GETAID-REMIND

La technique chirurgicale de résection peut-elle influencer la récidive de la maladie de Crohn ?

Zaher LAKKIS

Service de Chirurgie Viscérale, Digestive et Cancérologique - CHU Besançon
UFR des Sciences de la Santé - Université de Franche-Comté
INSERM U1098 – Interaction Hôte-Greffon Tumeur

Histoire naturelle de la maladie de Crohn : chirurgie

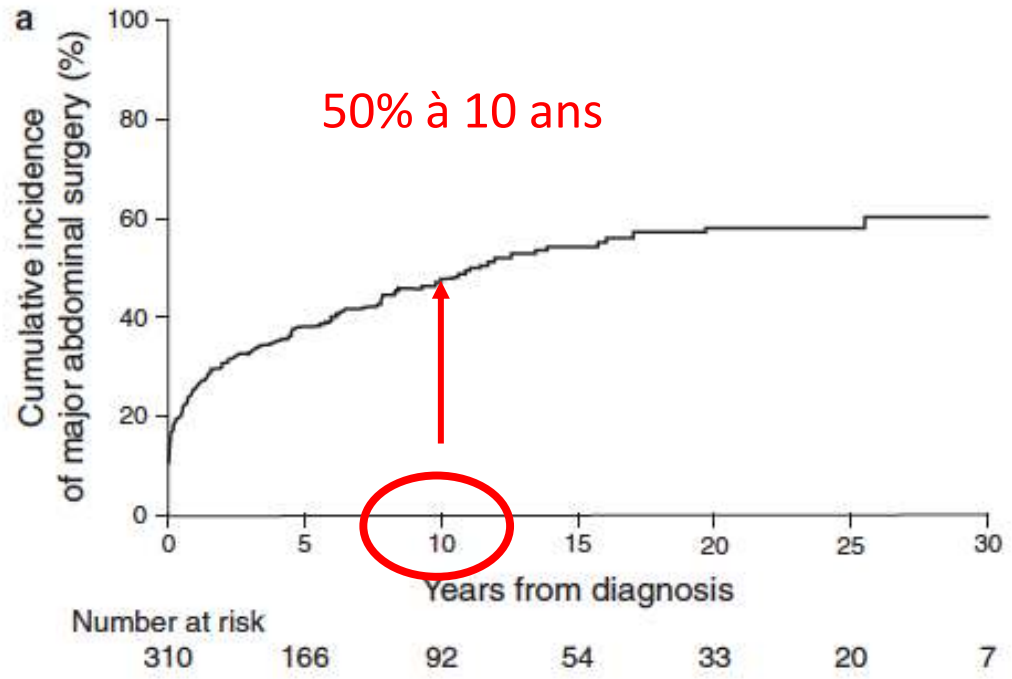
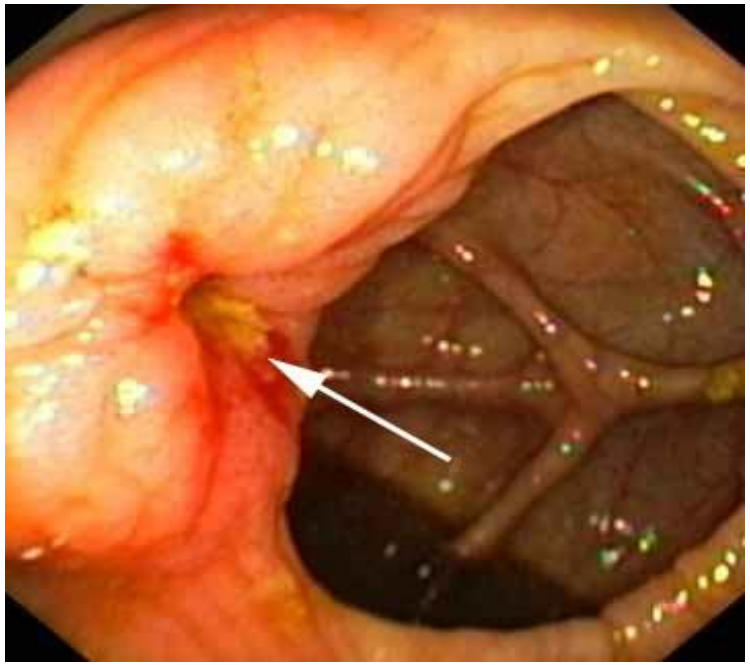
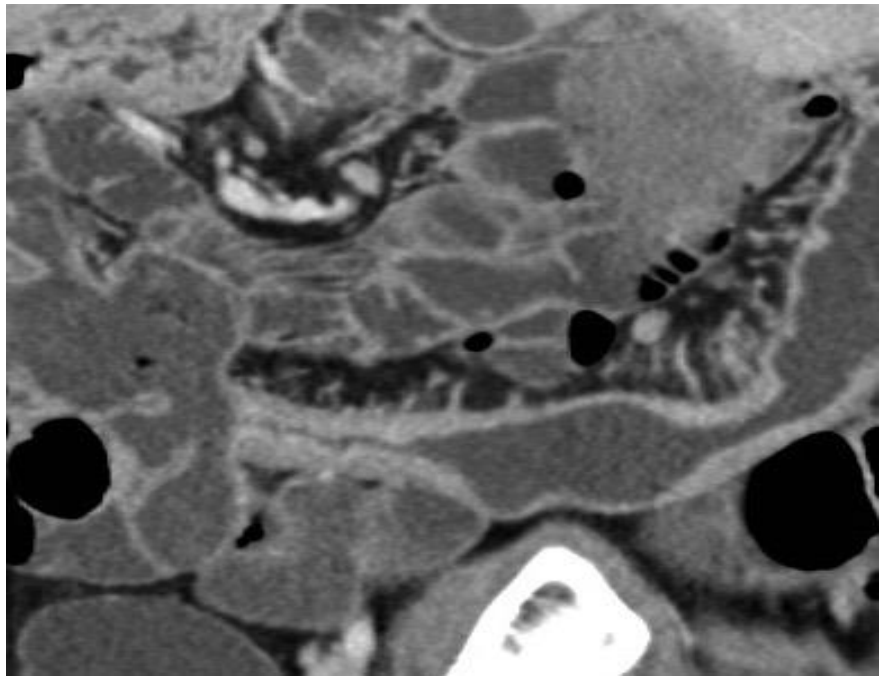


Figure 4. Cumulative risk of intestinal resection among 314 Crohn's disease patients from Olmsted County, MN, who were diagnosed between 1940 and 2001 (adapted from Dhillon *et al.* (39)).

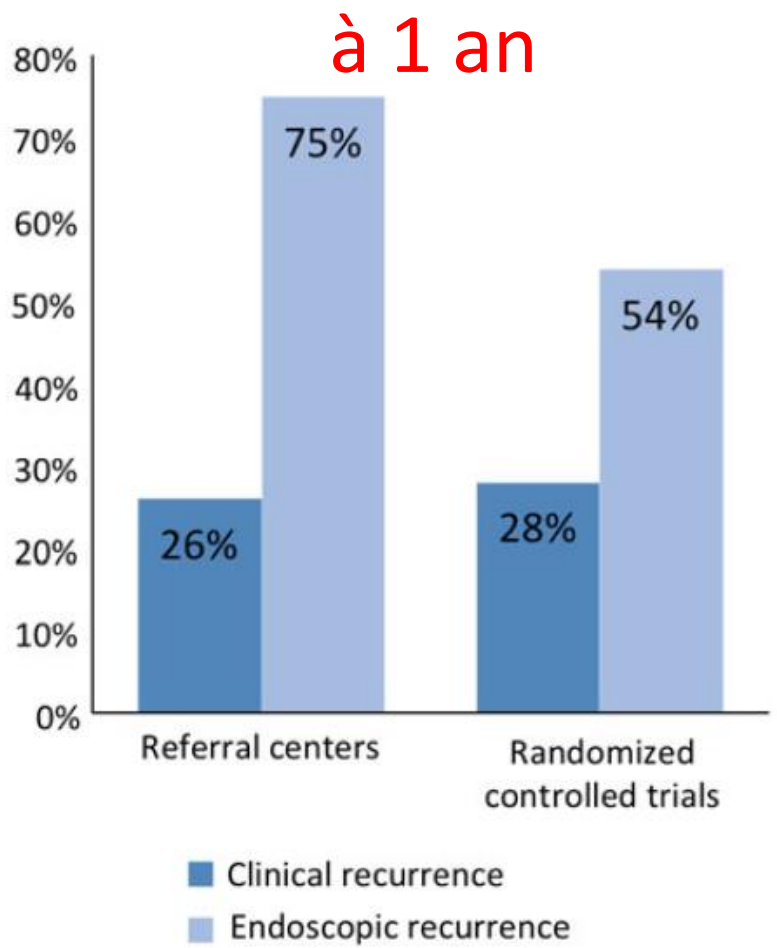
Peyrin-Biroulet. Am J 2012

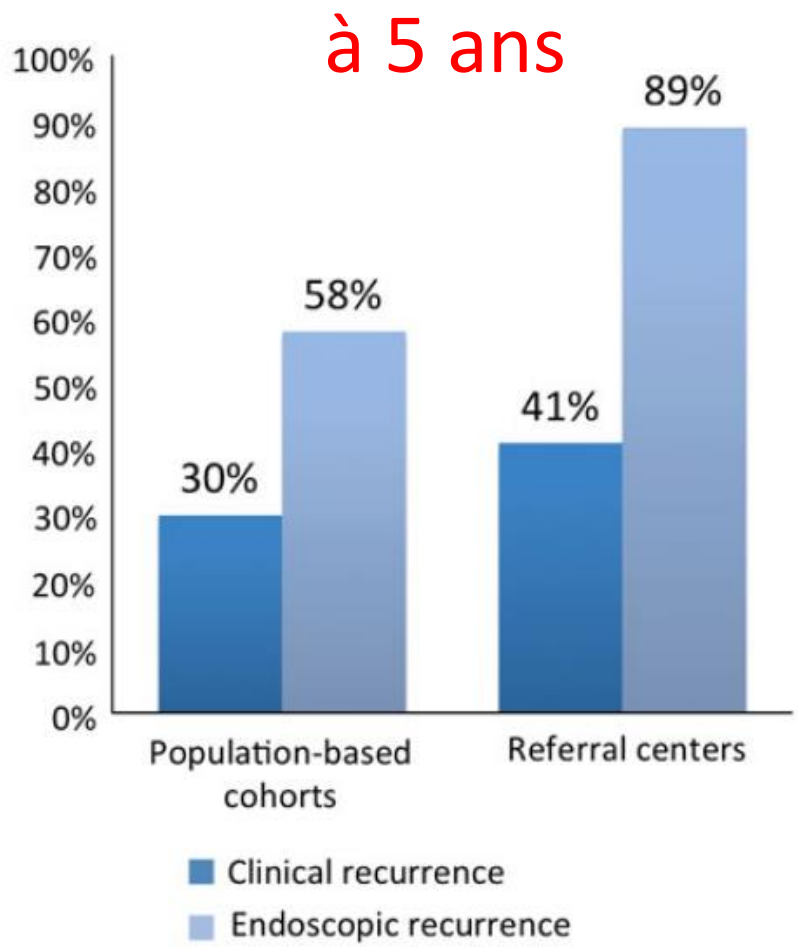
La chirurgie reste un événement fréquent dans la maladie de Crohn





La récidive post-opératoire est fréquente





Buisson et al, Aliment Pharmacol Ther 2012

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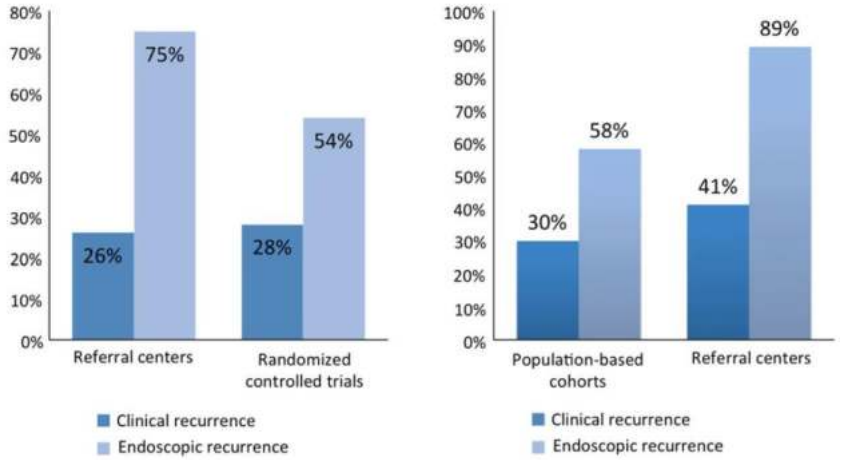
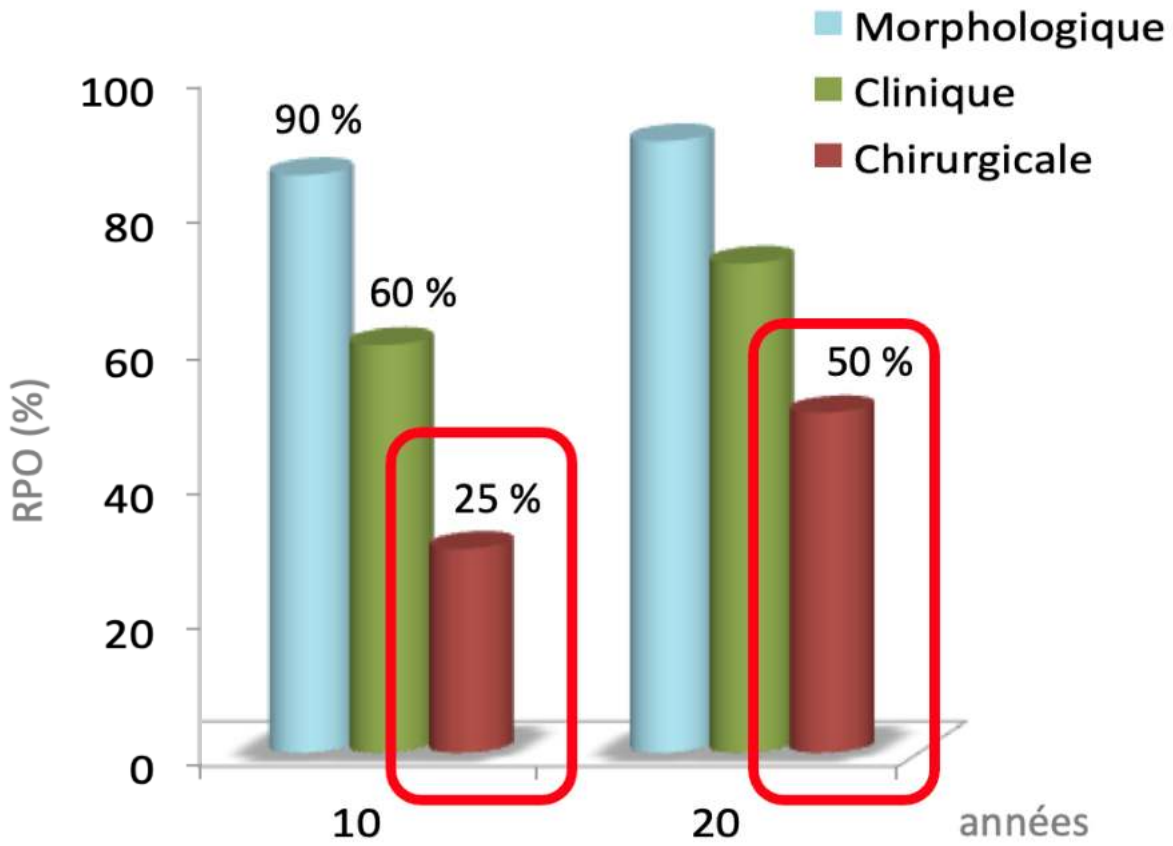
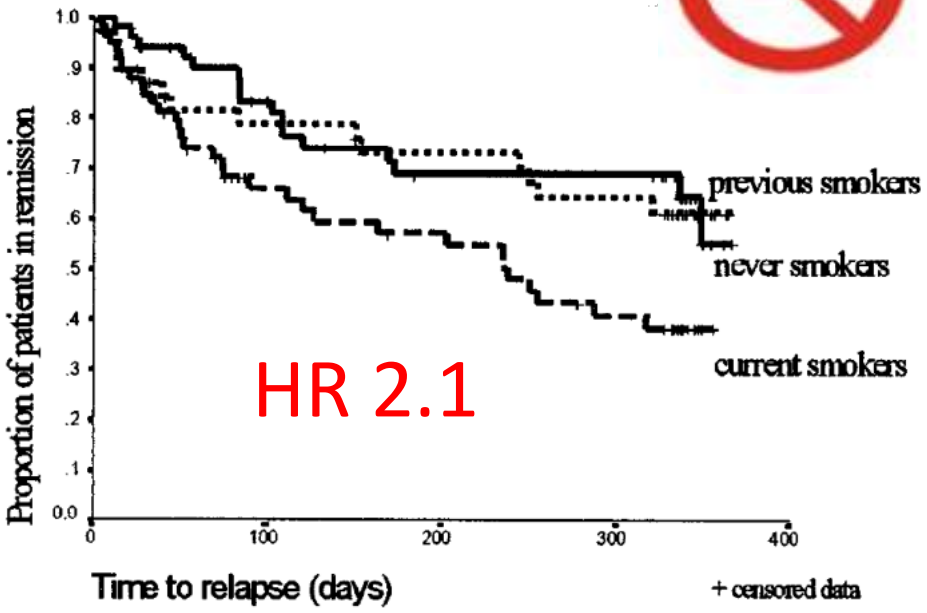




Buisson et al. Aliment Pharmacol Ther 2012
Nos P et al. World J Gastroenterol

Tabac



HR 2.1

Autres facteurs de risque

	Population-based cohorts	Referral centre studies	Randomised controlled trials
Strong predictor for POR			
Active smoking	–	+	+
Established predictors for POR			
Penetrating behaviour	–	+	+
Perianal disease	+	+	NA
Prior intestinal resection	+	+	NA
Extensive small bowel resection (>50cm)	+	+	NA
No predictive factors for POR			
Type of anastomosis	NA	–	NA
Surgical procedure	NA	–	NA
Resection margins	NA	–	NA
Age at the onset of the disease	+	+/–	–
Gender	NA	–	NA
Location of the disease	+/–	+/–	NA
Duration of the disease	–	+/–	NA
Surgical complications	NA	–	NA
Granuloma	NA	+/–	NA
Family history of CD	NA	–	NA
CRP level	NA	–	NA

Timmer et al. Gastro 1998
Buisson et al. APT 2012

Principes chirurgicaux communs

- **Epargne intestinale**
  - Lésions macroscopiques symptomatiques
  - Marges faibles (2 cm)
    - Ø impact sur la récidive
    - Mais marges histo +:
      ↗ complications septiques OR=2,99

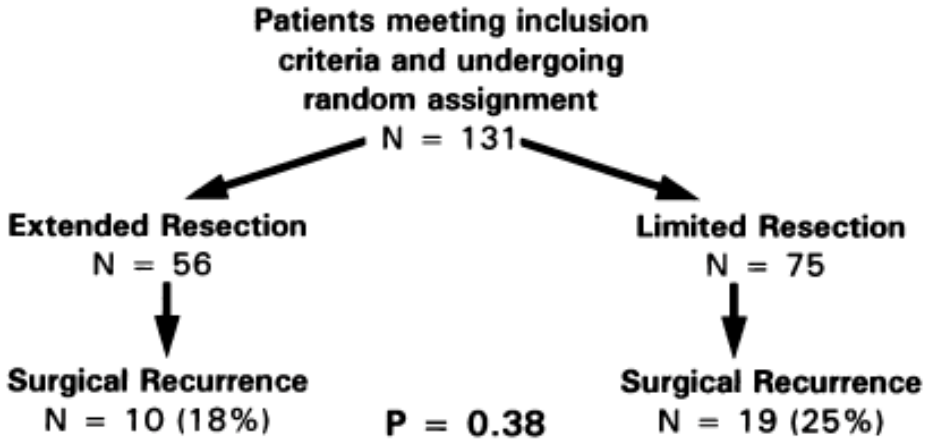
- **Laparoscopie**

> **2.2.1. ECCO-ESCP Statement 1A**
>
> Laparoscopy, when feasible, should be the preferred approach in surgery for CD. It results in reduced morbidity, shorter hospital stay, reduction in adhesions and hernia formation, and improved cosmesis [EL1]

Effect of Resection Margins on the Recurrence of Crohn's Disease in the Small Bowel

A Randomized Controlled Trial

Victor W. Fazio, M.D., F.R.A.C.S., F.A.C.S.,* Floriano Marchetti, M.D.,*
James M. Church, M.D., F.R.A.C.S., F.A.C.S.,* John R. Goldblum, M.D.,†
Ian C. Lavery, M.D., F.R.A.C.S., F.A.C.S.,* Tracy L. Hull, M.D.,* Jeffrey W. Milsom, M.D.,*
Scott A. Strong, M.D.,* John R. Oakley, M.D., F.R.A.C.S.,*
and Michelle Secic, M.S.‡



Fazio, et al. Ann Surg 1996.
Shental, et al. Dis Colon Rectum 2012.

Technique anastomotique

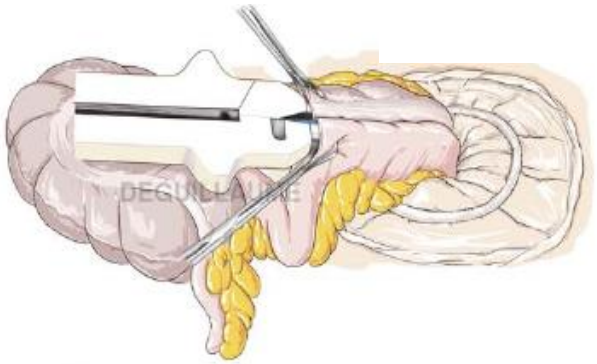
4 méta-analyses

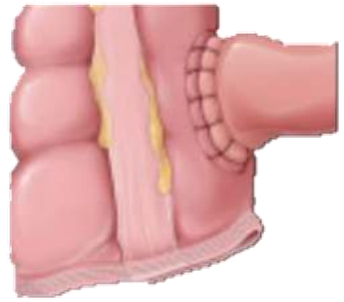
- LL mécanique > TT manuelle
- Anastomose TT < autre
- Cochrane: mécanique ≈ manuelle
  - 3 études…

Stapled versus handsewn methods for ileocolic anastomoses (Review)

Choy PYG, Bissett IP, Docherty JG, Parry BR, Merrie A, Fitzgerald A

THE COCHRANE COLLABORATION®

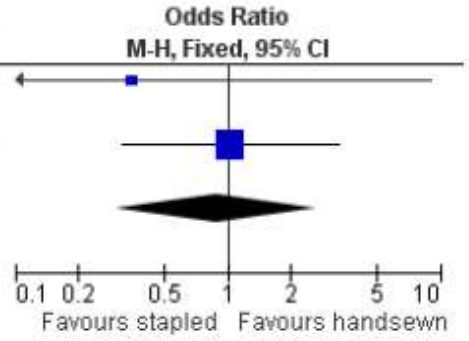




Overall anastomotic leak.

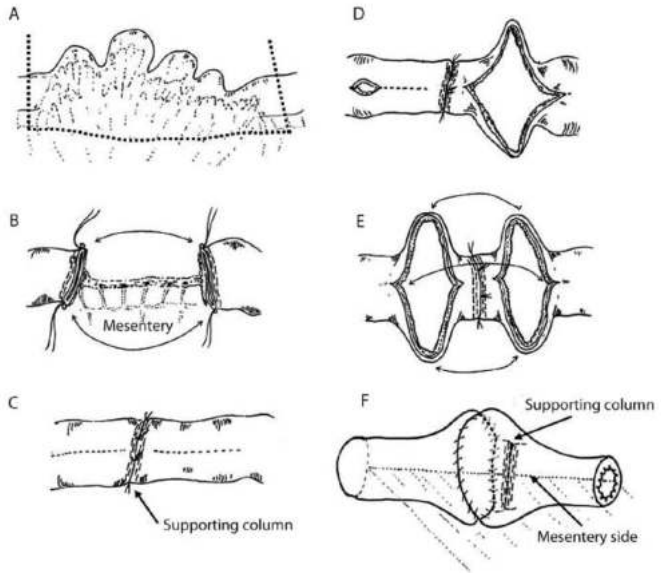
Study or Subgroup	Stapled Events	Stapled Total	Handsewn Events	Handsewn Total	Weight	Odds Ratio M-H, Fixed, 95% CI
Docherty 1995	0	31	1	34	20.4%	0.35 [0.01, 9.03]
Ikeuchi 2000	0	11	0	18		Not estimable
McLeod 2009	6	84	6	86	79.6%	1.03 [0.32, 3.32]
Total (95% CI)		**126**		**138**	**100.0%**	**0.89 [0.30, 2.64]**
Total events	6		7			

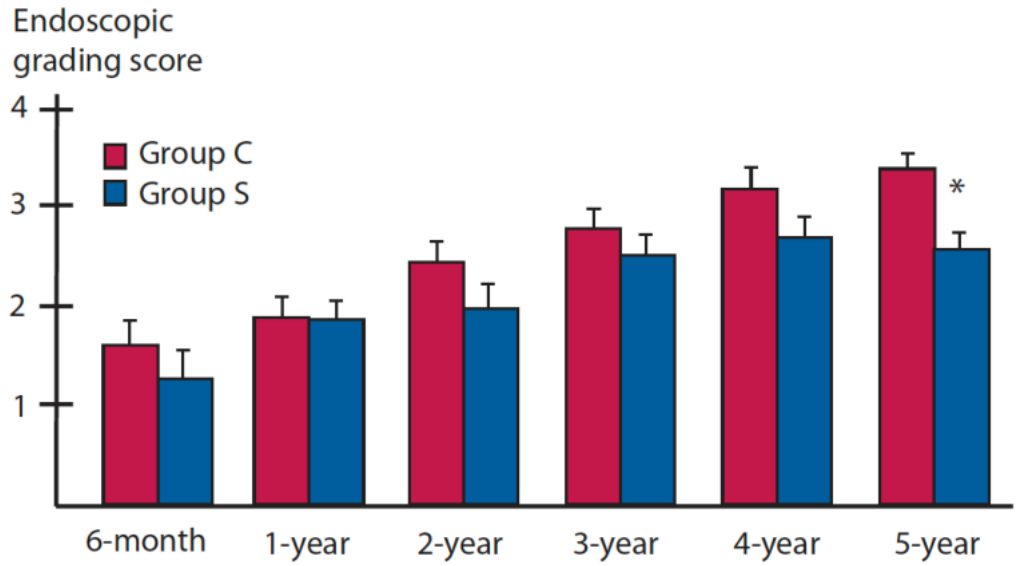
Heterogeneity: Chi² = 0.37, df = 1 (P = 0.54); I² = 0%
Test for overall effect: Z = 0.21 (P = 0.83)



He, et al. Dig Dis Sci 2014.
Choy, et al. Cochrane Database Syst Rev 2011.
Simillis, et al. Dis Colon Rectum 2007.
Huang, et al. J Crohns Colitis 2015.

A New Antimesenteric Functional End-to-End Handsewn Anastomosis: Surgical Prevention of Anastomotic Recurrence in Crohn's Disease





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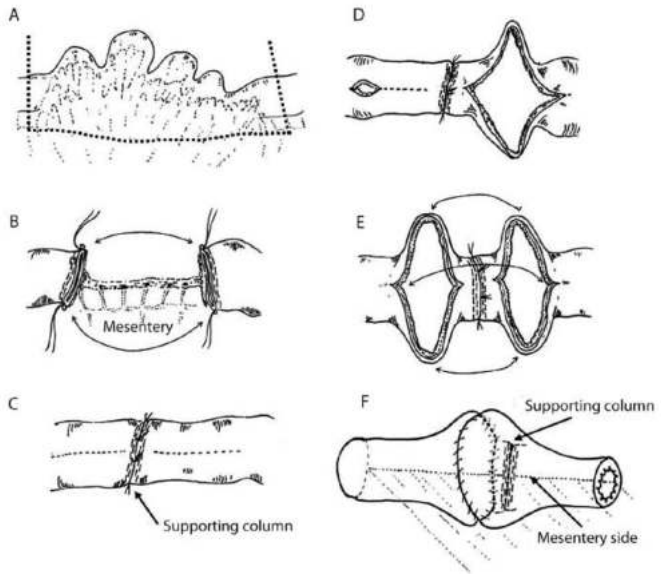

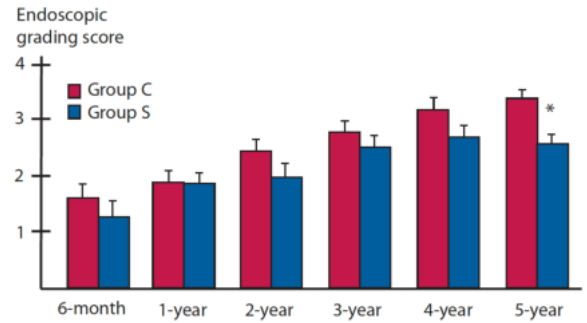

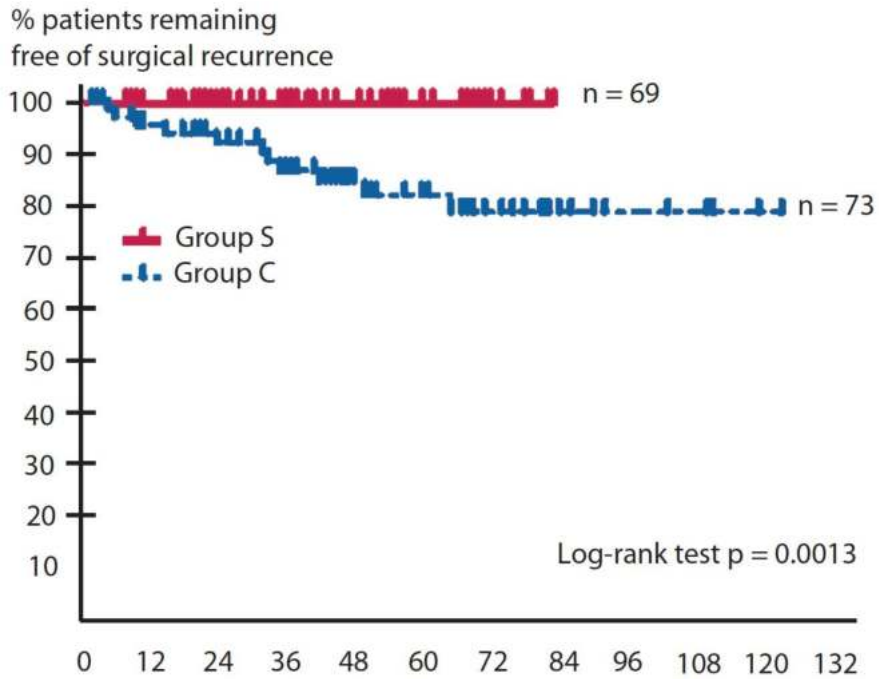


L'ANASTOMOSE
KONOS

Kono-S Anastomosis for Surgical Prophylaxis of Anastomotic Recurrence in Crohn's Disease: an International Multicenter Study

	Group J	Group US	*p* value	Cumulative experience
Number of patients	144	43		187
Male/female ratio	110/34 (3:1)	21/22 (1:1)	$p = 0.0006$	131/56 (2:1)
Median age at operation (months), (range)	31 (19–62)	32 (17–58)	NS	31 (17–62)
Site of anastomosis (*n*), (%)	171	45	$p = 0.005$	216
Ileocolic	93 (54 %)	38 (84 %)		131 (61 %)
Ileal/jejunal	65 (38 %)	5 (11 %)		70 (32 %)
Colonic	8 (5 %)	1 (2 %)		9 (4 %)
Ileorectal	5 (3 %)	1 (2 %)		6 (3 %)
Number of Kono-S anastomosis/patient (*n*), (%)				
1	113 (78 %)	41 (95 %)		154 (82 %)
2	27 (19 %)	2 (5 %)		29 (16 %)
3	3 (2 %)	0 (0 %)		3 (2 %)
4	1 (1 %)	0 (0 %)		1 (1 %)
Number of simultaneous strictureplasty (*n*), (%)	27 (19 %)	1 (2 %)	$p = 0.01$	28 (15 %)
Number of strictureplasty	52	1		67 (35 %)
Site of strictureplasty (small bowel/large bowel)	52/0	1/0		53/0
Factors influencing postoperative recurrence				
Active smoking (ratio), (%)	35/135 (26 %)	12/36 (33 %)	NS	47/171 (27 %)
Previous bowel operation (*n*), (%)	64 (43 %)	22 (51 %)	NS	86 (46 %)
Perforation type (*n*), (%)	66 (45 %)	18 (45 %)	NS	84 (45 %)
Postoperative medication (*n*), (%)				
Anti-TNFα antibody	55 (37 %)	12 (28 %)	NS	67 (36 %)
Short-term complications (<30 days)				
Anastomotic leakage, (*n*) (%)	1 (0.7 %)	1 (2.3 %)	NS	2 (1.1 %)
Surgical site infection, (*n*) (%)	8 (5.6 %)	2 (4.7 %)	NS	10 (5.3 %)
Abdominal abscess, (n) (%)	4 (2.8 %)	1 (2.3 %)	NS	5 (2.7 %)
Bowel obstruction, (*n*) (%)	3 (2.1 %)	1 (2.3 %)	NS	4 (2.1 %)
Other, (*n*) (%)	3 (2.1 %)	0 (0 %)		3 (1.6 %)
Mortality	0	0	NS	0

J GastroIntest Surg 2015

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Mortality	0	0	NS	0

	Group J ($n = 144$)	Group US ($n = 29$)	*p* value	Cumulative Experience ($n = 173$)
Median follow-up (months), (range)	65 (43–138)	32 (12–44)	$p = 0.003$	60 (12–138)
Endoscopic recurrence	i3.0 (i1–i4)			i3.0 (i1–i4)
Rutgeert's score, median (range) at 5 years, (*n*)	(30)	NA		(30)
Number of surgical recurrence	2	0		2
5 years cumulative surgical recurrence, (95 % CI)	1.8 % (0.0–4.3 %)	NA		1.7 % (0.0–4.2 %)
10 years cumulative surgical recurrence, (95 % CI)	1.8 % (0.0–4.3 %)	NA		1.7 % (0.0–4.2 %)

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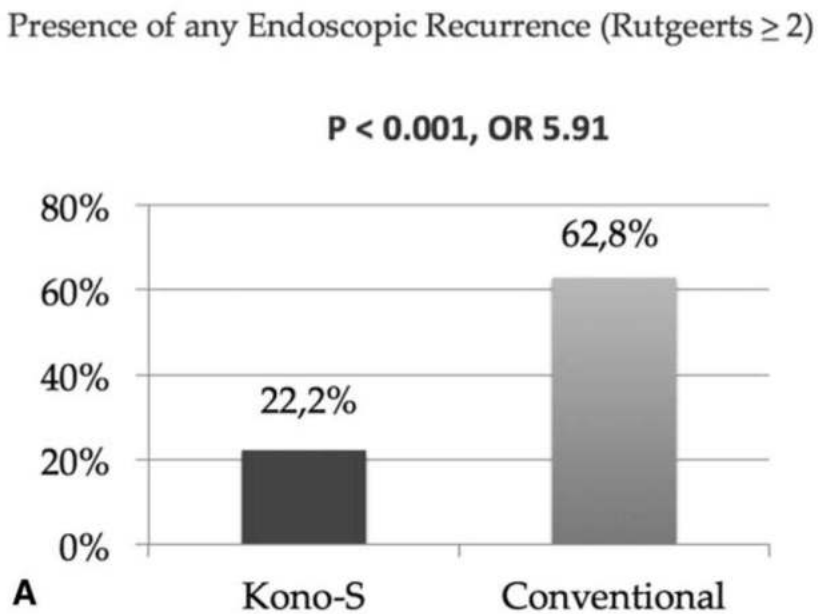
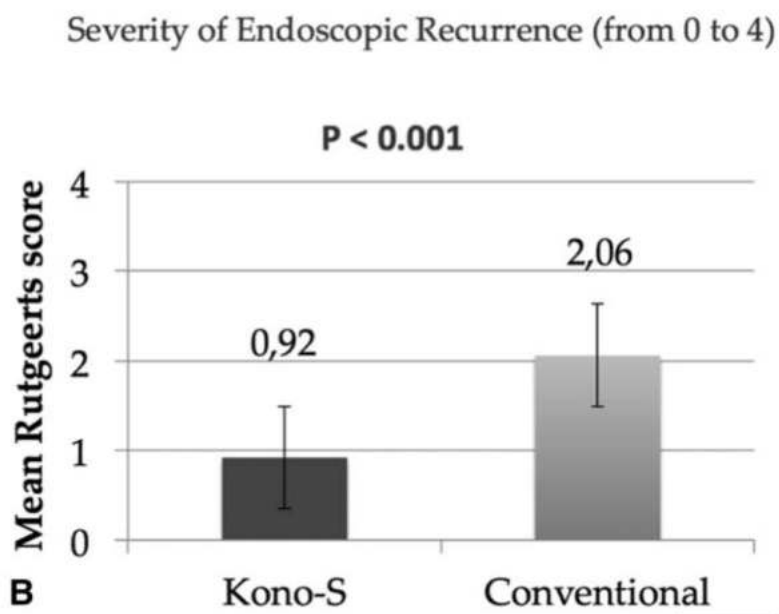
Surgical Prevention of Anastomotic Recurrence by Excluding Mesentery in Crohn's Disease: The SuPREMe-CD Study - A Randomized Clinical Trial

TABLE 1. Features of the study population

	Kono (n = 36)	Conventional (n = 43)	*P*
Mean age (range)	34 (25–50)	43 (27–60)	0.16
Males:females	18:18	22:21	0.84
Active smoking, n (%)	11 (38%)	10 (27%)	0.56
Mean disease duration (mos)	101 ± 88	105 ± 89	0.82
Previous surgery, n (%)	19 (52%)	28 (65%)	0.4
Behavior, n (%)			
Fistulizing	16 (44.4%)	19 (44.2%)	0.98
Stricturing	15 (41.7%)	16 (37.2%)	0.68
Stricturing/fistulising	5 (13.9%)	8 (18.6%)	0.57
CD extension, cm (range)	41 (34–52)	48 (38–55)	0.2
Type of surgery, n (%)			0.8
Open	17 (47.3%)	21 (48.8%)	
Laparoscopy	19 (52.7%)	22 (51.2%)	
Preoperative treatment, n			
5-ASA	3	4	0.8
Corticosteroids	11	11	0.62
Azathioprine	8	8	0.69
Infliximab	6	5	0.51
Adalimumab	6	8	0.82
Vedolizumab	2	7	0.13
Postoperative treatment, n			0.15
5-ASA	8	10	
Adalimumab	10	18	
Azathioprine	14	10	
Infliximab	0	1	
Metronidazole	35	42	
Ustekinumab	3	0	
Vedolizumab	1	4	

CD, Crohn disease; CI, confidence interval; OR, odds ratio; 5-ASA, mesalamine.





Annals of Surgery • August 2020

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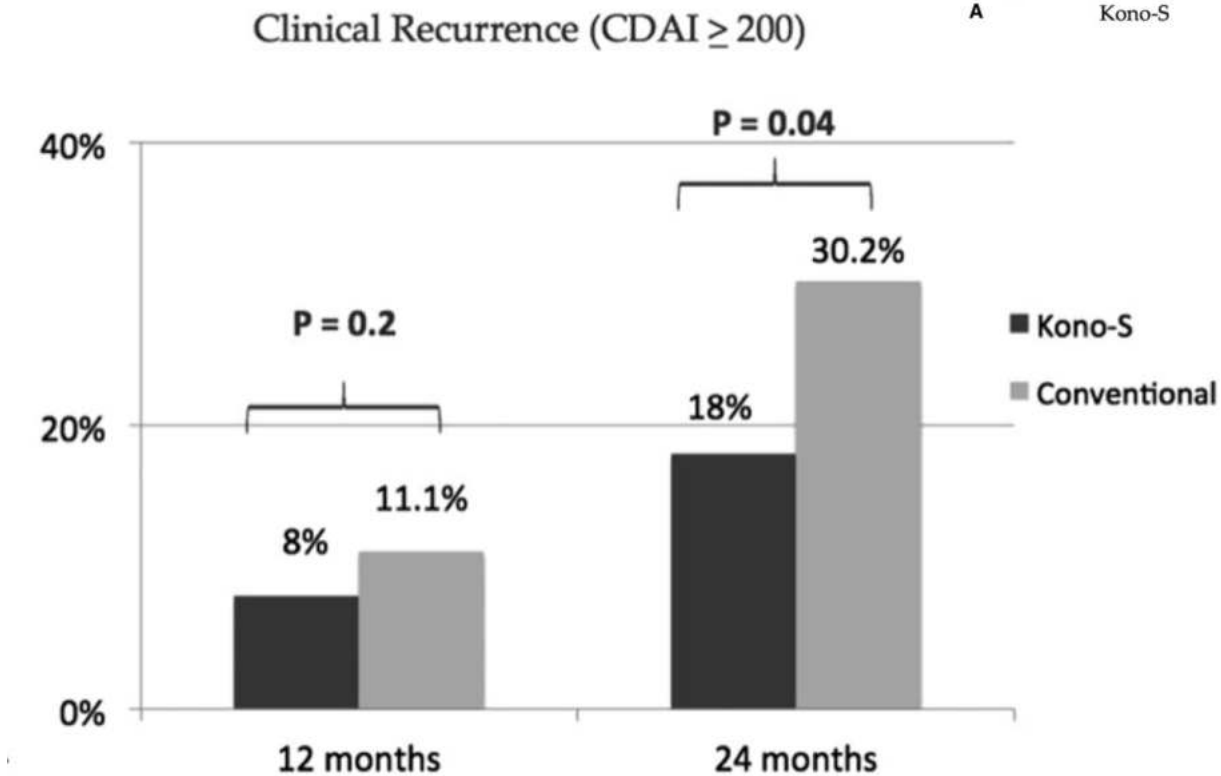
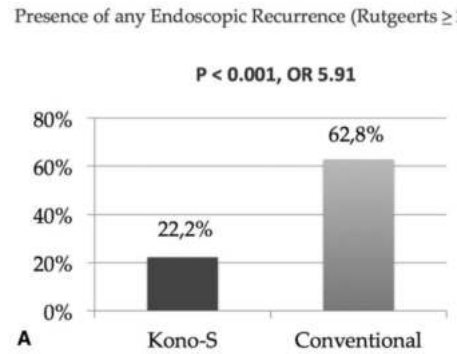
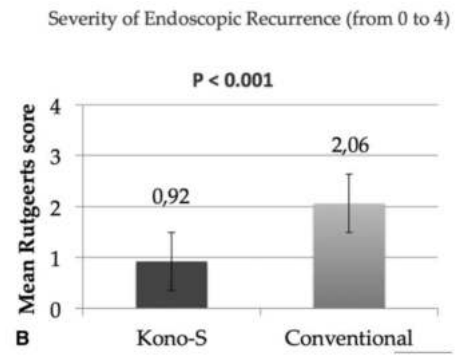






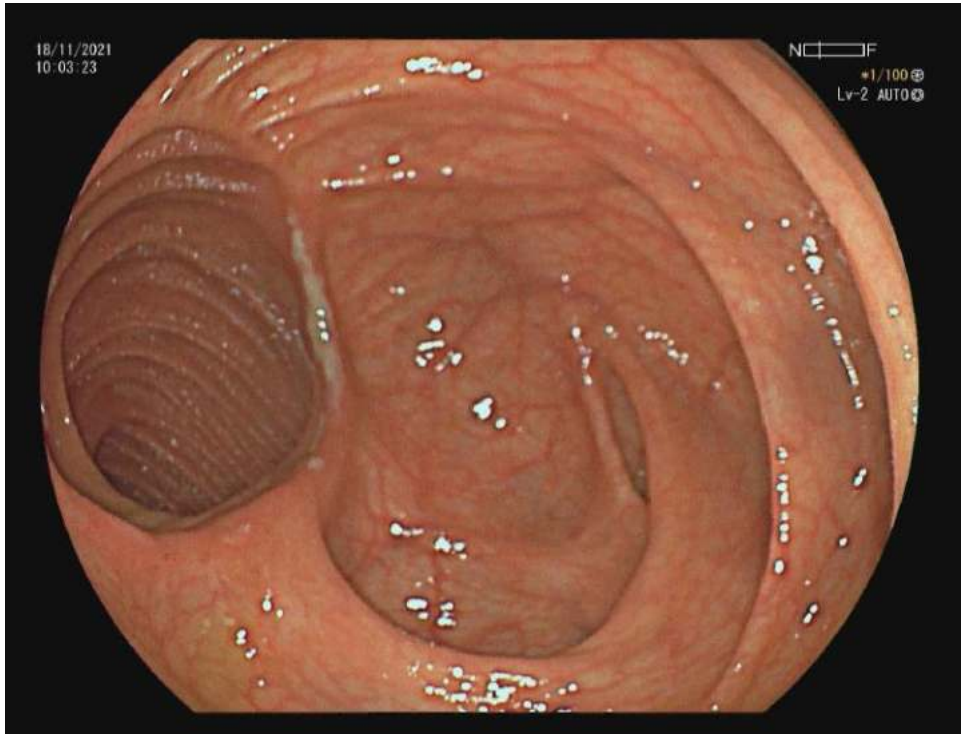
Surgical Techniques and Risk of Postoperative Recurrence in CD: A Game Changer?

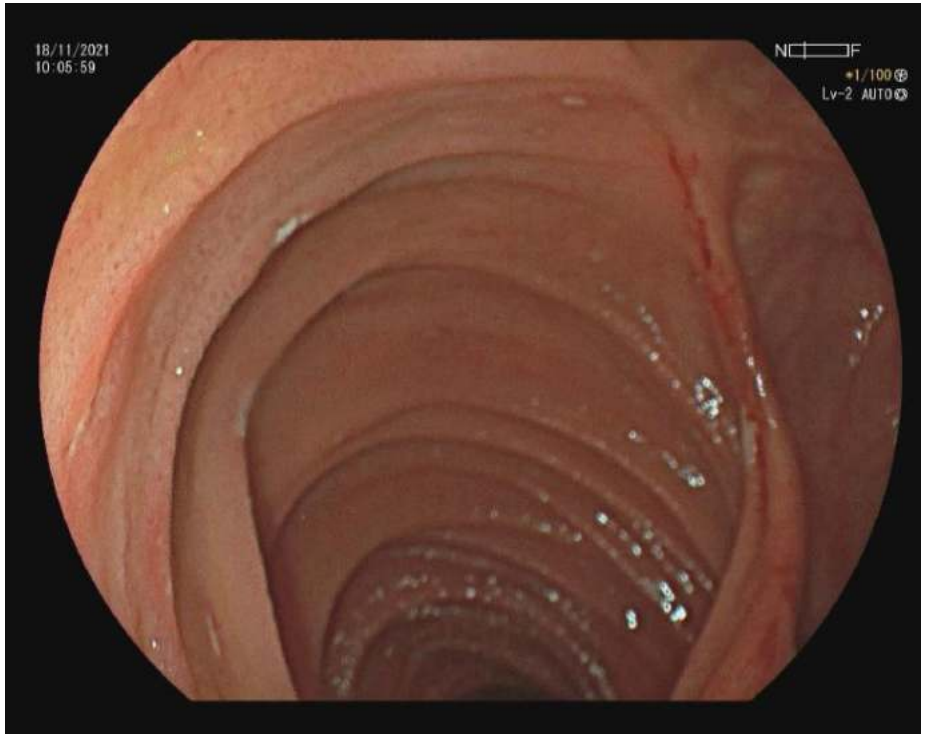
Surgical Strategies to Reduce Postoperative Recurrence of Crohn's Disease After Ileocolic Resection

Authors	Year	Countries	Study design	Patients, *n*	Brief Kono-S results
Kono et al. [25]	2011	Japan	Comparative with historical cohort	142 (69 Kono-S)	Median Rutgeerts score in Kono-S group: 2.6 Median Rutgeerts score in control group: 3.4
Kono et al. [29]	2016	Japan, USA	Case series	187	Group J: 2 surgical anastomotic recurrences (median follow-up of 65 months) Group US: 0 surgical anastomotic recurrences (median follow-up of 32 months)
Shimada et al. [27]	2018	Japan	Comparative with historical cohort	215 (117 Kono-S)	Surgical recurrence in 4 patients (3.4%) in the Kono-S group and 24 (24.4%) in the end-to-end group
Seyfried et al. [30]	2019	Germany	Case series	53	No anastomotic recurrence was detected
Luglio et al. [28]	2020	Italy	RCT	79 (36 Kono-S)	Overall postoperative recurrence in Kono group versus side-to-side group: 22.2 versus 62.8% Severe postoperative endoscopic recurrence in Kono group versus side-to-side group: 13.8 versus 34.8%
Katsuno et al. [31]	2015	Japan	Case series	30	Mean Rutgeerts score: 0.7 (0–3) Median follow-up: 14.8 months (3 –37) (for 19 patients)
Krane et al. [32]	2015	USA	Case series	96	Mean Rutgeerts score: 0.71 (0–3) Mean follow-up: 22.8 months (3.0–53.9) (for 62 patients)
Fichera et al. [33]	2012	Japan, Italy	Case series	44	Mean Rutgeerts score: 0.72 (0–3) Mean follow-up: 6.8 months (for 18 patients)

Essai US-UE en cours (NCT03256240)

Inflamm Intest Dis 2022
Front Surg 2021





Images du Pr Vuitton

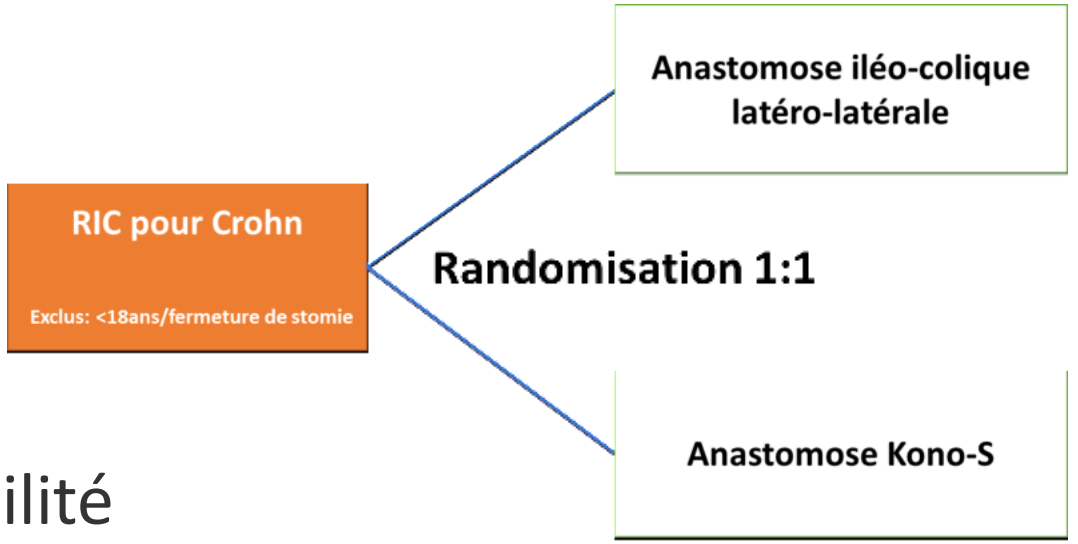
KOALA

KOno-S Anastomosis compared to conventional iLeocolic Anastomosis to reduce recurrence in Crohn's disease:
a superiority phase III prospective, randomized, multicenter, double-blind trial

- Primary endpoint: Rutgeerts endoscopy score ≥ i2 at 6 months

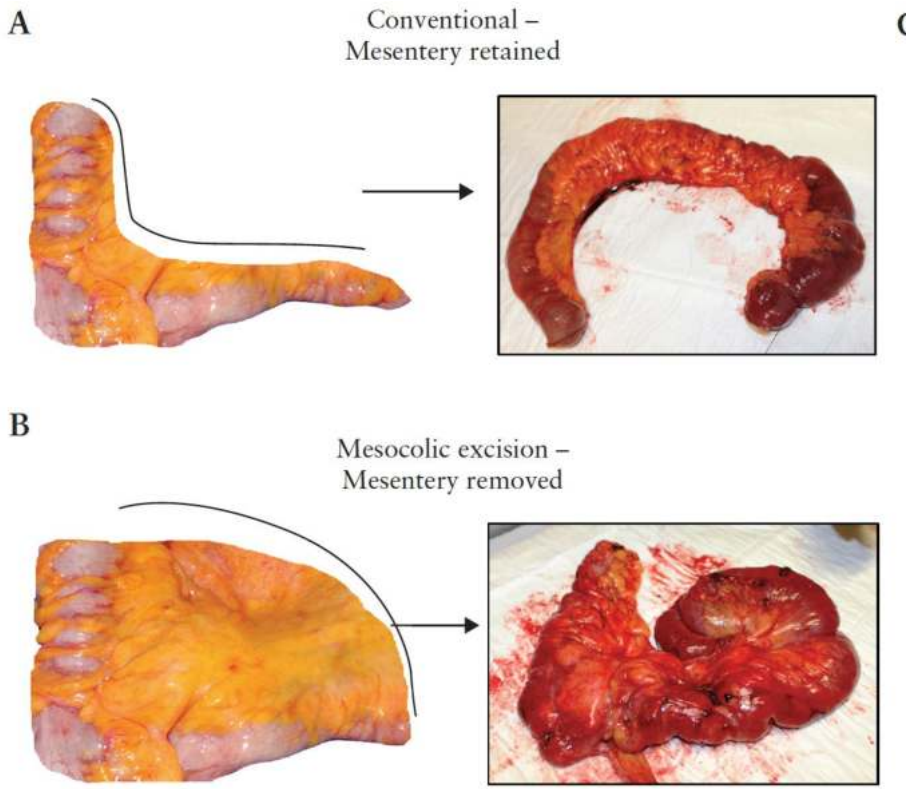
(centralized reading of filmed endoscopy)

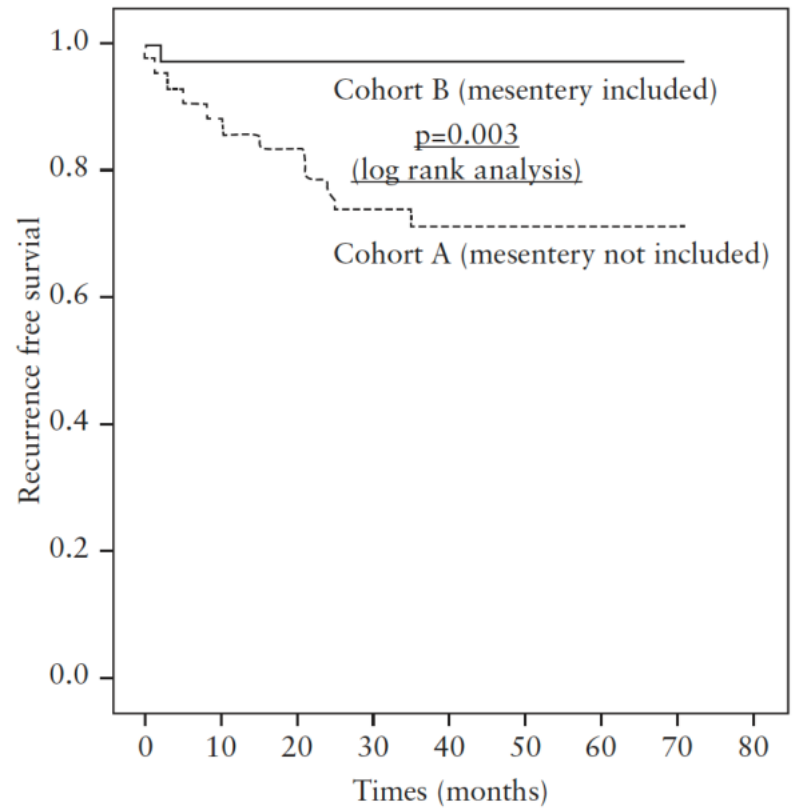
- H0: 50% → H1: 30%
- Dropout 10%
- Exclus pour fistule 5%
- 1 analyse intermédiaire efficacité/futilité
- Nombre de patients à inclure : 226 patients



PHRC-N 2023

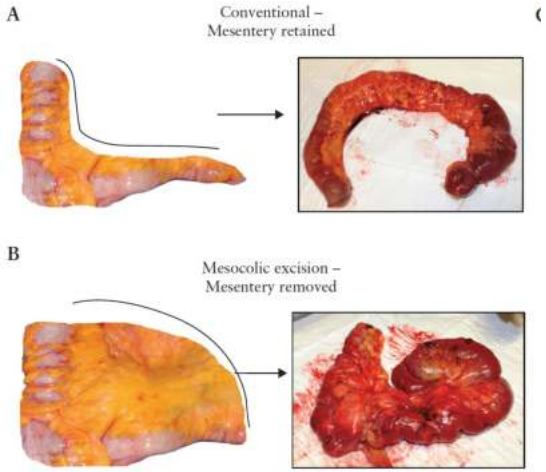
Inclusion of the Mesentery in Ileocolic Resection for Crohn's Disease is Associated With Reduced Surgical Recurrence





Journal of Crohn's and Colitis, 2018

Inclusion of the Mesentery in Ileocolic Resection for Crohn's Disease is Associated With Reduced Surgical Recurrence



ClinicalTrials.gov

NCT04538638

Mesenteric SParIng Versus Central mesenterectomY in Ileocolic Resection for Terminal Ileitis in Crohn's Disease (SPICY)

Journal of Crohn's and Colitis, 2018

TAKE HOME MESSAGES

La technique de résection peut-elle influencer la récidive de de Crohn ?

- Niveau de preuve faible
- Rôle de la Kono-S dans la récidive ?
- Kono-S et résection mésentérique ?
- Plusieurs études randomisées à venir

Séminaire
GETAID-REMIND

La technique chirurgicale de résection peut-elle influencer la récidive de la maladie de Crohn ?

Zaher LAKKIS

Service de Chirurgie Viscérale, Digestive et Cancérologique - CHU Besançon
UFR des Sciences de la Santé - Université de Franche-Comté
INSERM U1098 – Interaction Hôte-Greffon Tumeur