

Cancer du Rectum:

préservation d'organe et conservation sphinctérienne.

Yves Panis

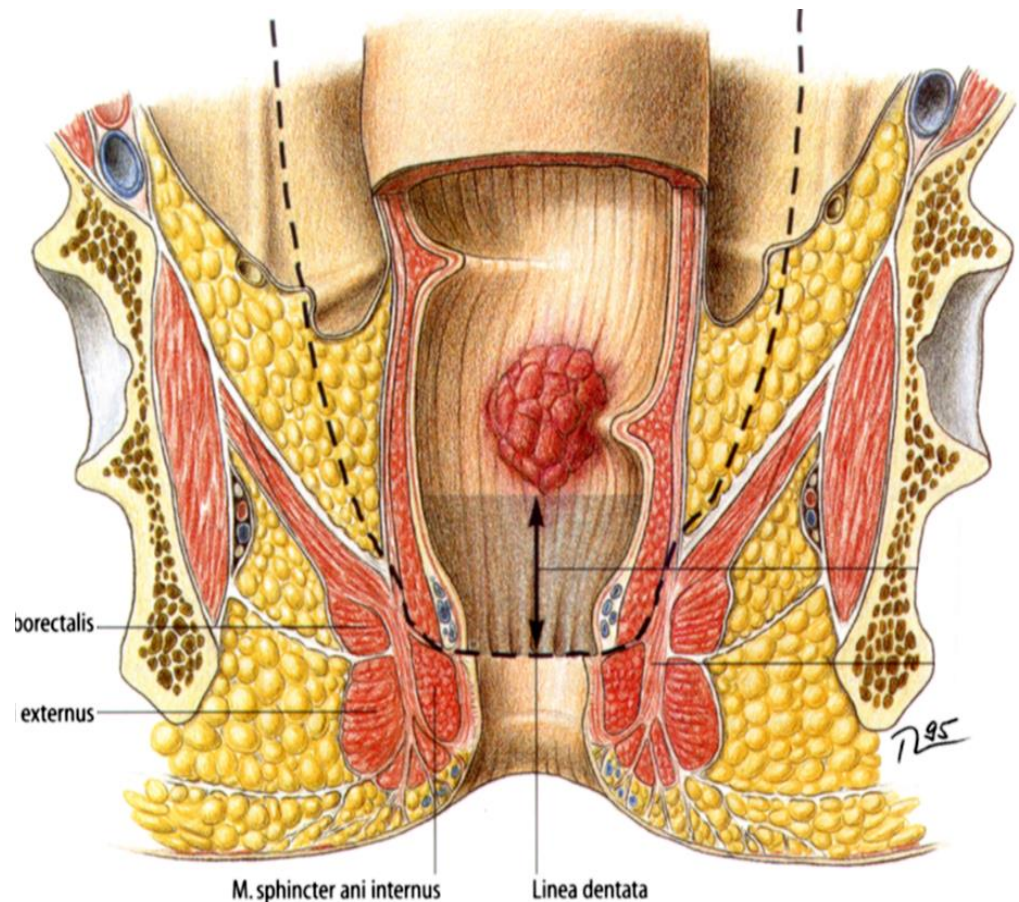
Service de Chirurgie Colorectale (PMAD)
Hôpital Beaujon et Université Paris VII, France.



Journée Scientifique R2CD, Vannes, 2017

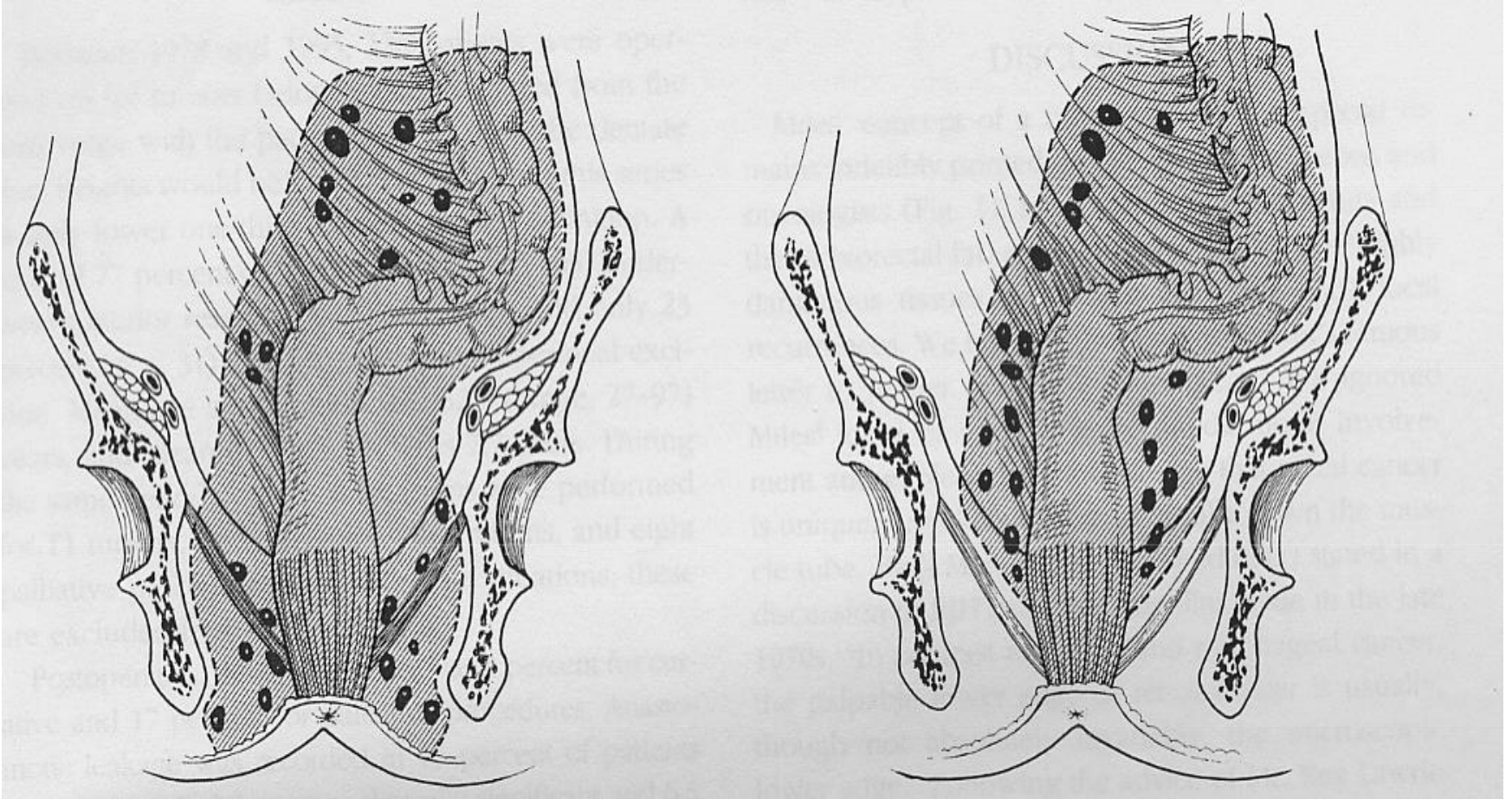
Cancer du bas rectum

- Exérèse totale du mésorectum
 - Marge digestive distale de 1 cm
 - Anastomose basse
 - Le plus souvent coloanale



Quand faut-il faire une amputation ?
Peut-on descendre encore plus bas ?

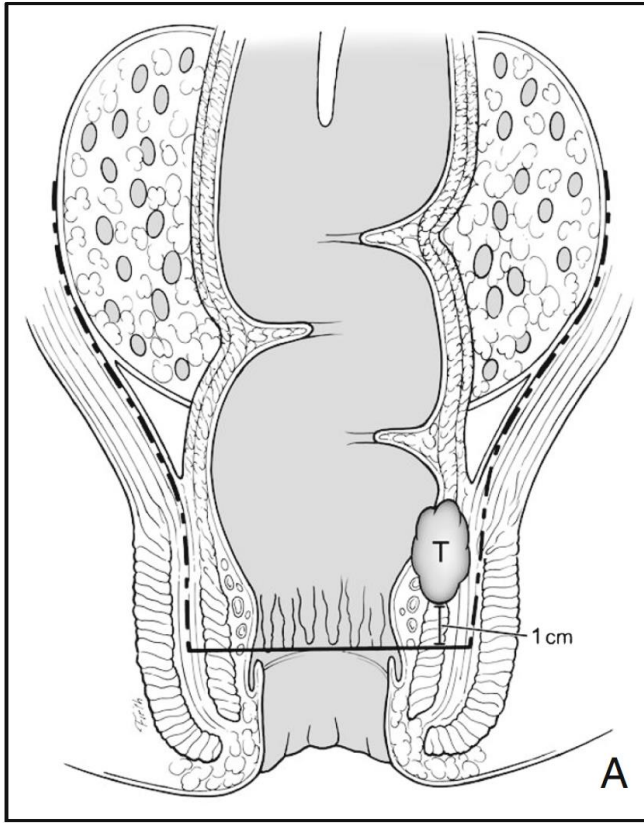
Amputation ou conservation sphinctérienne ?



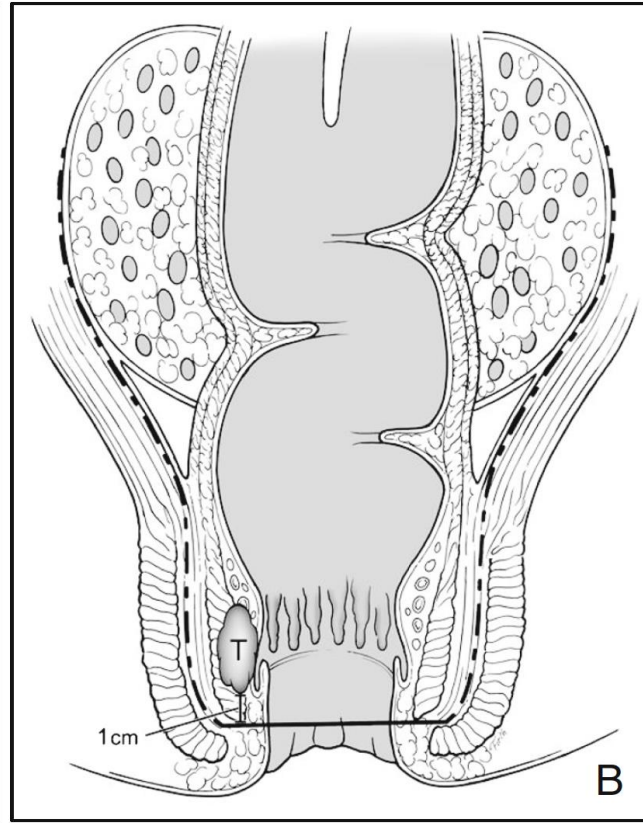
Heald RJ et al. Dis Colon Rectum 1997; 40: 747-751.

Cancer du très bas rectum

- Résection inter-sphinctérienne:
 - Un seul objectif: respecter une marge de 1 cm sous la tumeur (+++)



Anastomose coloanale « classique »
avec résection partielle du
sphincter interne



Résection inter-sphinctérienne
avec résection totale du
sphincter interne

Management of rectal cancer: the 2016 French guidelines

Z. Lakkis*, G. Manceau†, V. Bridoux‡,
A. Brouquet§, S. Kirzin¶, L. Maggiori**,
C. de Chaisemartin††, J. H. Lefevre‡‡ and
Y. Panis** on behalf of the French Research
Group of Rectal Cancer Surgery (GRECCAR)
and the French National Society of
Coloproctology (SNFCP)

Statement 3: Sphincter-sparing surgery

The preservation of the anal sphincter should be considered if a distal margin of at least 1 cm below the tumour can be achieved (Grade B). It is recommended that the decision whether or not to perform conservative surgery should be taken preoperatively after neoadjuvant therapy (Grade C). Using a preoperative MRI classification of low rectal cancer allows assessment of the possibility of sphincter preservation [17] (Grade B).

Management of rectal cancer: the 2016 French guidelines

Z. Lakkis*, **G. Manceau†**, **V. Bridoux‡**,
A. Brouquet§, **S. Kirzin¶**, **L. Maggiori****,
C. de Chaisemartin††, **J. H. Lefevre‡‡** and
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Statement 4: Delay before surgery

After radiotherapy, surgery should be performed within 7 days following the end of irradiation [12] (Grade A). After CRT, surgery can be performed **6–11 weeks** after the end of irradiation [13] (Grade A).

Effect of Interval (7 or 11 weeks) Between Neoadjuvant Radiochemotherapy and Surgery on Complete Pathologic Response in Rectal Cancer: A Multicenter, Randomized, Controlled Trial (GRECCAR-6)

Jérémie H. Lefevre, Laurent Mineur, Salma Kotti, Eric Rullier, Philippe Rouanet, Cécile de Chaisemartin, Bernard Meunier, Jafari Mehrdad, Eddy Cotte, Jérôme Desrame, Mehdi Karoui, Stéphane Benoist, Sylvain Kirzin, Anne Berger, Yves Panis, Guillaume Piessen, Alain Saudemont, Michel Prudhomme, Frédérique Peschaud, Anne Dubois, Jérôme Loriau, Jean-Jacques Tuech, Guillaume Meurette, Renato Lupinacci, Nicolas Goasgen, Yann Parc, Tabassome Simon, and Emmanuel Tiret

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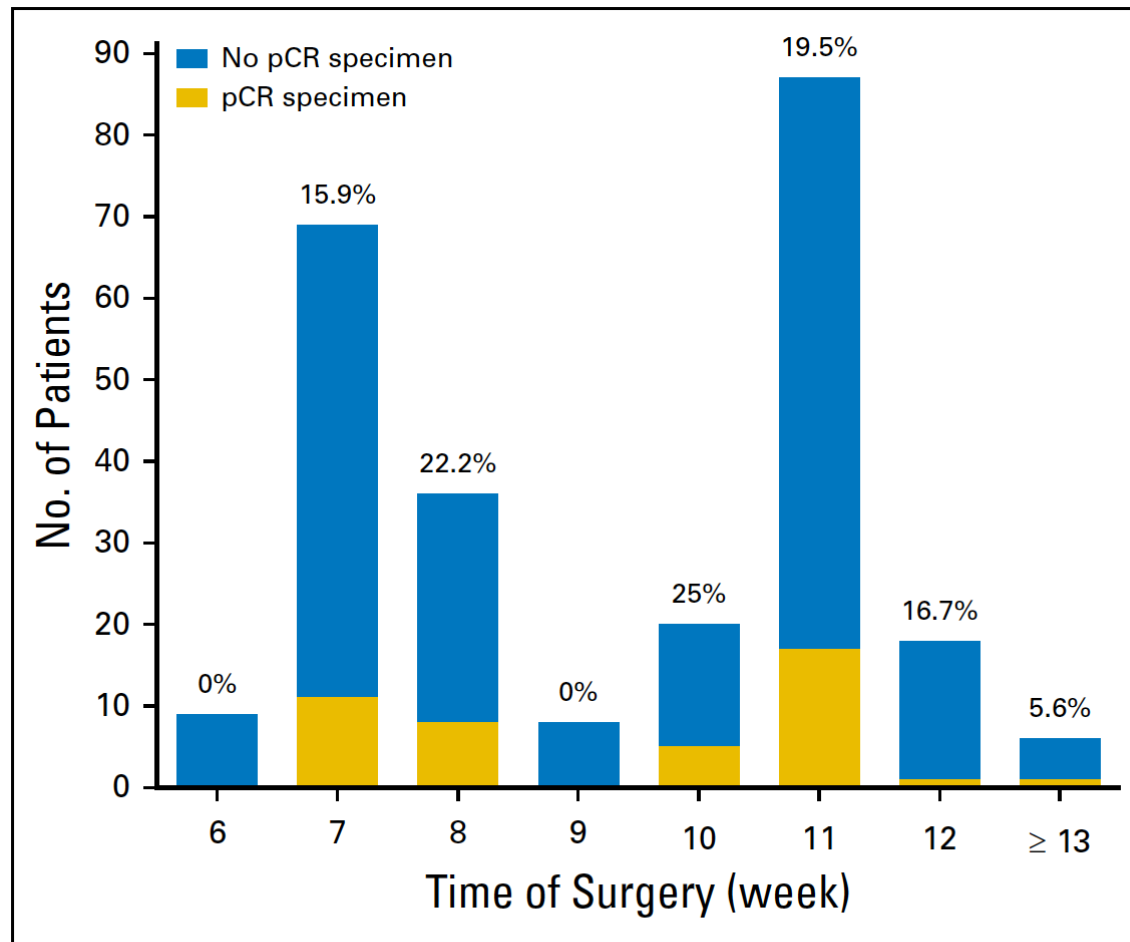


Fig 2. Effect of time of surgery on the complete pathologic response rate. pCR, pathologic complete response.

Increasing the Interval Between Neoadjuvant Chemoradiotherapy and Surgery in Rectal Cancer

A Meta-analysis of Published Studies

Ann Surg 2016;263:458–464

Fausto Petrelli, MD,* Giovanni Sgroi, MD,† Enrico Sarti, MD,‡ and Sandro Barni, MD*

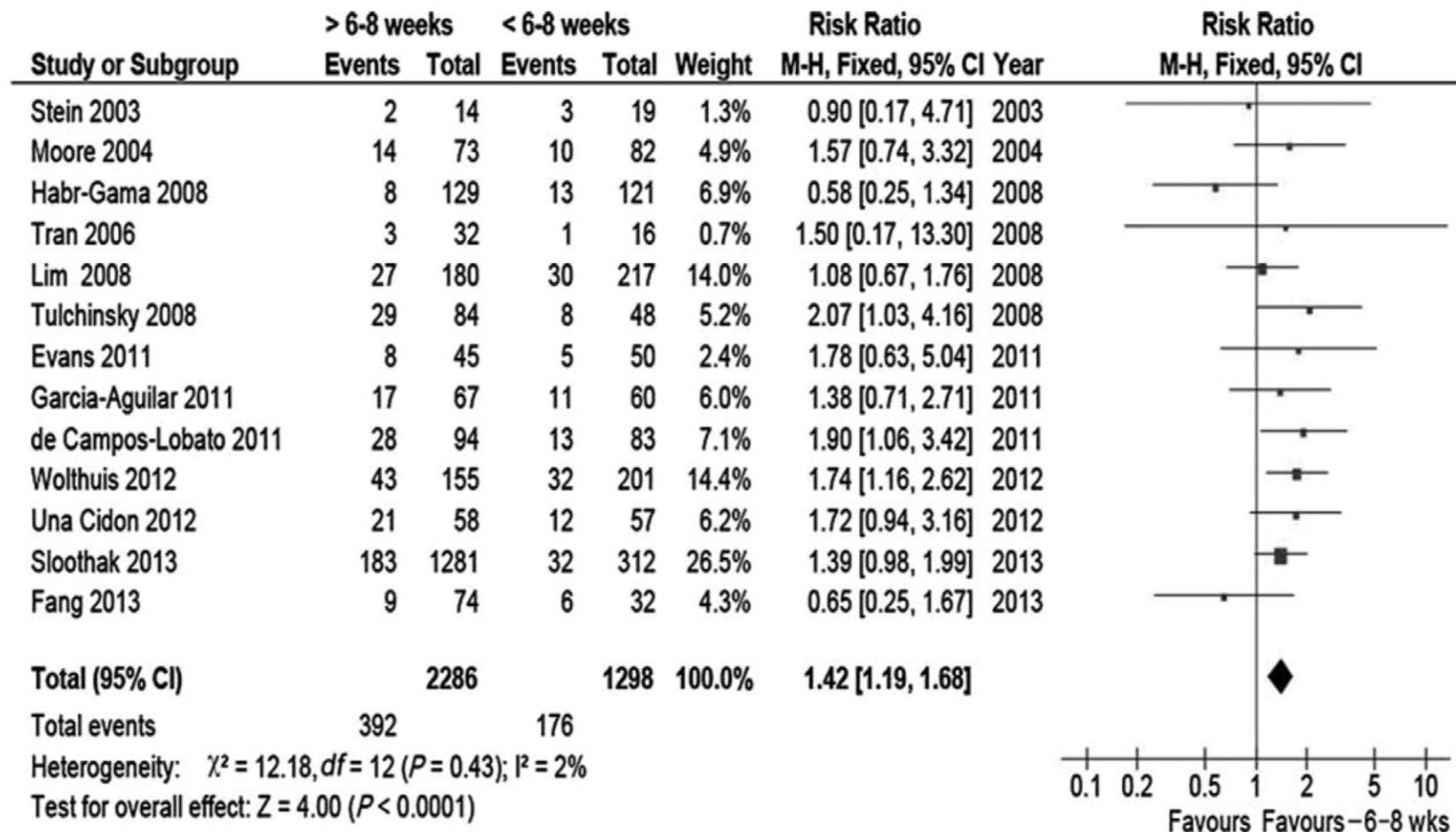
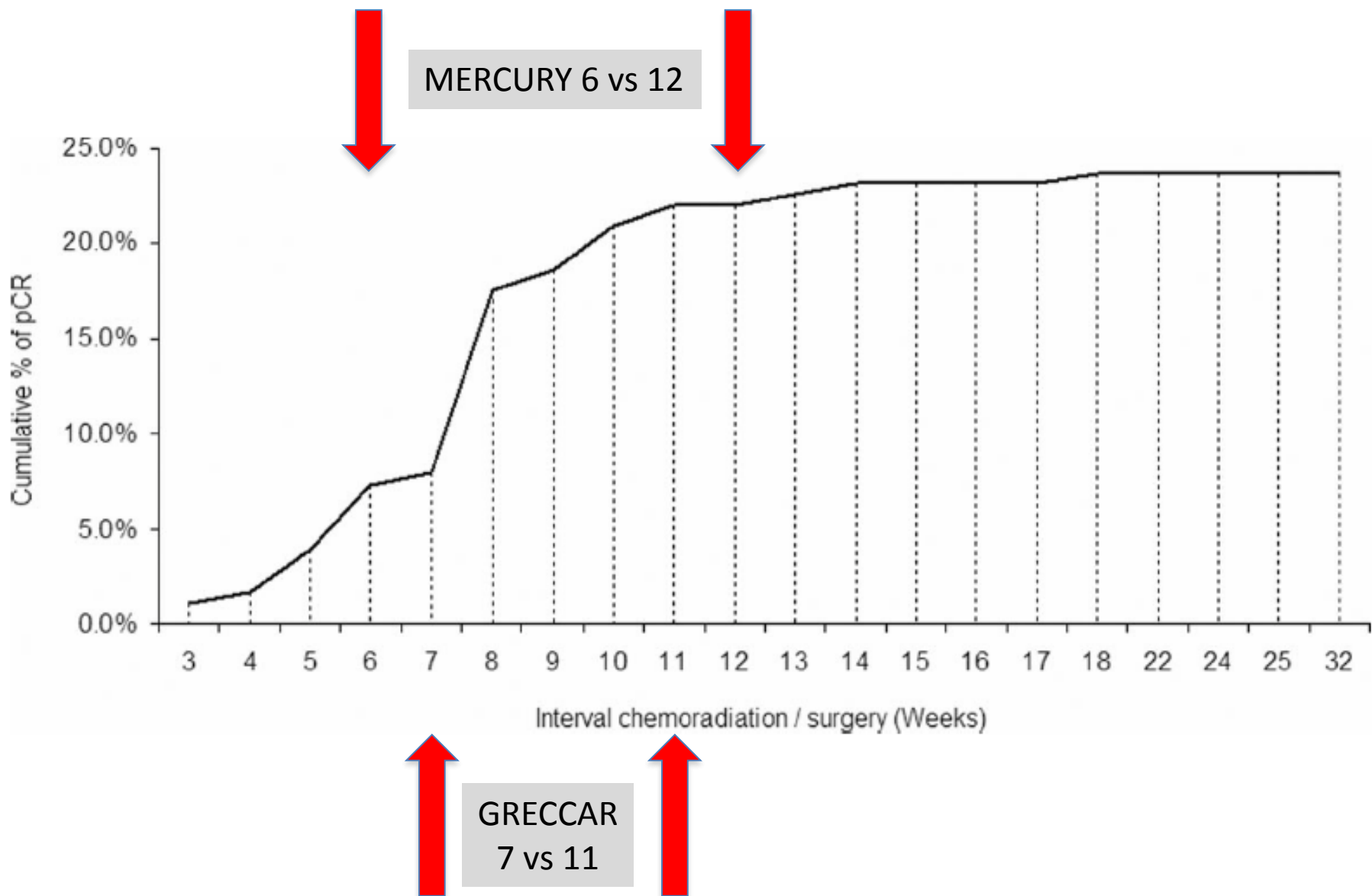


FIGURE 2. Forest plot for pathologic complete response rate meta-analysis.



Cancer du très bas rectum

- **La résection inter-sphinctérienne est une bonne solution:**
 - Les patients préfèrent éviter la stomie définitive
 - Si cela échoue, l'AAP reste toujours possible:
 - Ce n'est pas vrai dans l'autre sens !
 - Les résultats oncologiques sont équivalents à ceux de l'AAP
- **Il faut juste bien sélectionner les patients:**
 - Prévenus d'une possible mauvaise fonction



Systematic review of outcomes after intersphincteric resection for low rectal cancer

S. T. Martin, H. M. Heneghan and D. C. Winter

British Journal of Surgery 2012; **99**: 603–612

Reference	n	Median follow-up (months)	R0 resection (%)	Local recurrence (%)	5-year survival (%)		Operative mortality (%)	Overall morbidity (%)	Continence (mean bowel movements in 24 h)
					Overall	Disease-free			
Akasu <i>et al.</i> ²⁶ (2008)	120	42	96.7	6.7	91	77	0.8	33.0	NR
Bannon <i>et al.</i> ²⁷ (1995)	109	40	NR	11.0	87	NR	1.0	10.0	NR
Braun <i>et al.</i> ²⁸ (1992)	63	80	100	11	62	NR	6	35	2.2
Chamlou <i>et al.</i> ²⁹ (2007)	90	56	94	7	82	75	0	19	2.3
Han <i>et al.</i> ³⁰ (2009)	40	43	100	5	97	86	0	8	2.7
Hohenberger <i>et al.</i> ³¹ (2006)	65	70	92	23	NR*	NR*	3	25	NR
Köhler <i>et al.</i> ³² (2000)	31	82	100	10	79	NR	0	65	3.3
Krand <i>et al.</i> ³³ (2009)	47	68	98	2	85	82	0	38	2.3
Rullier <i>et al.</i> ¹⁹ (2005)	92	40	89	2	81	70	0	27	NR
Saito <i>et al.</i> ³⁴ (2009)	132	40	100	10.6	80	69	0	30.3	NR
Saito <i>et al.</i> ³⁵ (2006)	228	41	98.7	3.6	92	83	0.4	24.0	NR
Schiessel <i>et al.</i> ³⁶ (2005)	121	94	96.7	5.3	88	NR	0.8	17.1	2.2
Weiser <i>et al.</i> ¹¹ (2009)	44	47	92	0	96	83	0	39	NR
Yamada <i>et al.</i> ³⁷ (2009)	107	41	100	2.5	92	87	0	27.0	3.7
Weighted mean		56	97.0	6.7	86.3	78.6	0.8	25.8	2.7

*Reported cancer-free survival rate of 84 per cent for intersphincteric resection group at 5-year follow-up; however, R1/2 resections and postoperative deaths were excluded from analysis. NR, not reported.

Systematic review of outcomes after intersphincteric resection for low rectal cancer

S. T. Martin, H. M. Heneghan and D. C. Winter

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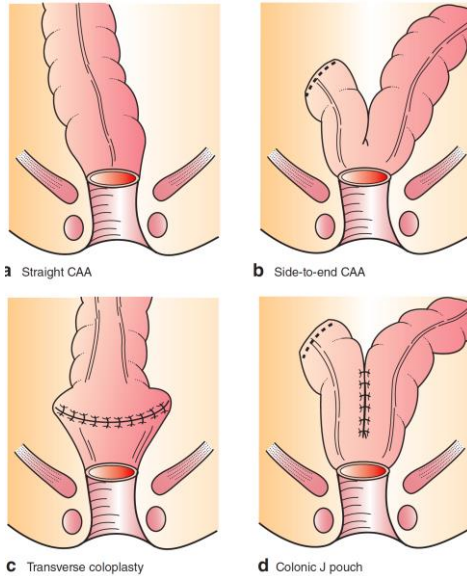
Reference	n	Functional tool	Anal manometry	Bowel movements per 24 h*	Perfect continence (%)	Faecal soiling (%)	Incontinence to flatus (%)	Urgency (%)	Antidiarrhoeal medication (%)
Braun <i>et al.</i> ²⁸ (1992)	63	Mayo Clinic classification	No	2.2 (1–3)	75	15	17	22	NR
Chamlou <i>et al.</i> ²⁹ (2007)	90	Jorge and Wexner continence score	No	2.3 (NR)	41	59	25	19	NR
Han <i>et al.</i> ³⁰ (2009)	40	Kirwan classification	No	2.7 (NR)	43	29	29	31	40
Köhler <i>et al.</i> ³² (2000)	31	General questionnaire	Yes	3.3 (NR)	30	63	11	NR	NR
Krand <i>et al.</i> ³³ (2009)	47	Kirwan classification	No	2.3 (2–5)	80	11	9	2	0
Saito <i>et al.</i> ³⁵ (2006)	228	Jorge and Wexner continence score, and Kirwan score	No	NR	32.7	29.1	29.1	NR	NR
Schiessel <i>et al.</i> ³⁶ (2005)	121	Williams and Johnston classification	Yes	2.2 (1–9)	86.3	13.7	NR	NR	NR
Yamada <i>et al.</i> ³⁷ (2009)	107	Jorge and Wexner continence score, and Kirwan score	No	3.7 (2–6)	42.3	27.9	NR	NR	NR
Weighted mean†				2.7(0.6)	51.2(22.7)	29.1(19.9)	23.8(8.9)	18.6(12.2)	18.4(28.3)
95% c.i.				2.2, 3.1	35.4, 67.1	15.3, 43.0	16.7, 30.9	6.7, 30.5	–20.8, 57.6

*Values for individual studies are mean (range); †with s.d. in parentheses. NR, not reported; c.i., confidence interval.

Meta-analysis of reconstruction techniques after low anterior resection for rectal cancer

BJS 2015; 102: 735–745

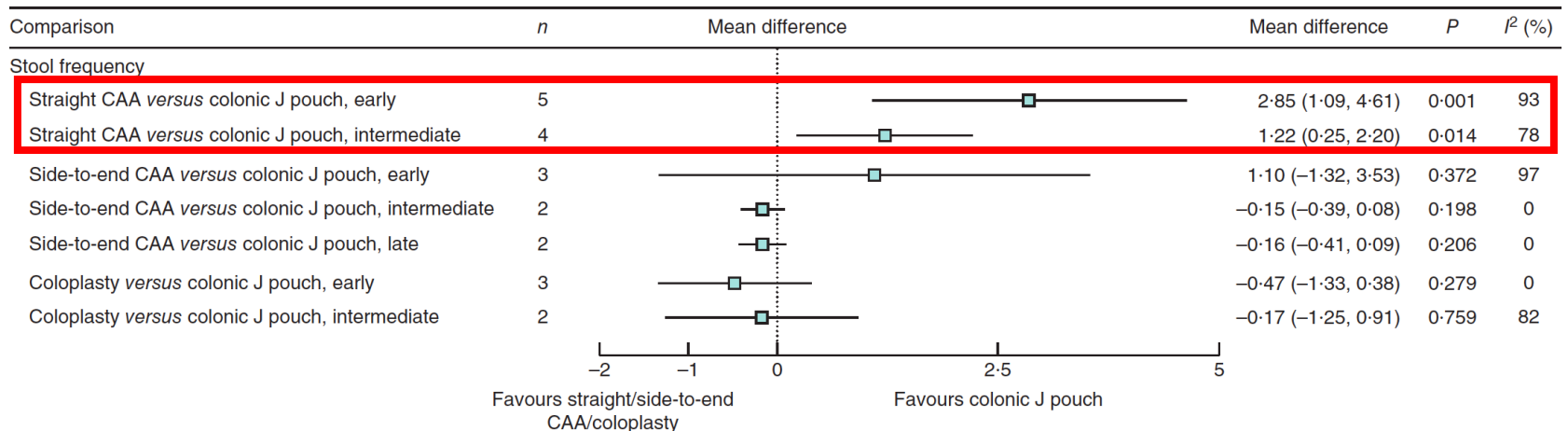
F. J. Hüttner^{1,2}, S. Tenckhoff², K. Jensen³, L. Uhlmann³, Y. Kulu¹, M. W. Büchler¹, M. K. Diener^{1,2} and A. Ulrich¹



Réservoir en J mieux que anastomose directe (+++)

Latéro- terminale = réservoir en J (+++)

Coloplastie plus trop utilisée



a Stool frequency

Functional disorders after rectal cancer resection: does a rehabilitation programme improve anal continence and quality of life?

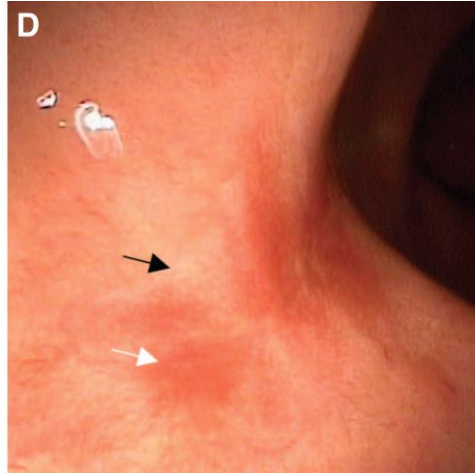
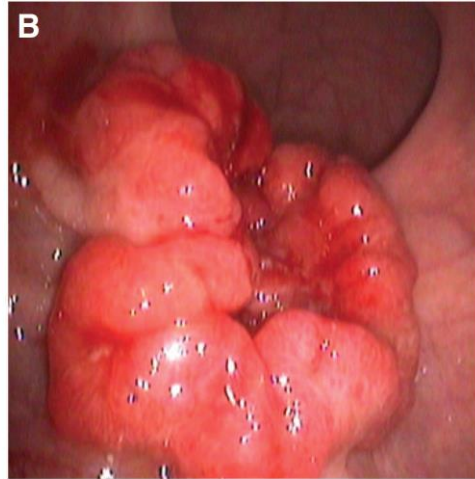
A. Laforest*, F. Bretagnol*, A. S. Mouazan†, L. Maggiori*, M. Ferron* and Y. Panis*

	Rehabilitation group (n = 22)	Control group (n = 24)	P		Rehabilitation group (n = 22)	Control group (n = 24)	P
SF-36							
PF	49.1 ± 6.8	47.4 ± 7.4	0.46	Stool frequency per 24 h (range)	2.6 (1–6)	4.0 (1–10)	0.025
RP	40.0 ± 12.4	39.3 ± 9.7	0.97	Urgency	8 (36)	9 (38)	1.00
BP	48.1 ± 11.2	48.7 ± 9.6	0.81	Stool fragmentation	15 (65)	19 (79)	0.50
GH	46.5 ± 9.0	43.0 ± 7.8	0.17	Dyschezia	5 (22)	15 (63)	0.008
VT	47.3 ± 9.9	39.3 ± 8.2	0.004	Antidiarrhoeal medications	12 (55)	12 (50)	0.77
SF	42.0 ± 10.4	45.6 ± 10.2	0.24	Alimentary restriction	8 (36)	10 (42)	0.88
RE	43.5 ± 11.0	43.0 ± 12.5	0.92	Wexner score (range)	8.3 (2–14)	9.9 (5–17)	0.10
MH	44.2 ± 12.4	44.0 ± 9.5	0.84	Kirwan classification			
PCS	48.8 ± 8.5	46.0 ± 6.7	0.21	I Perfect	4 (18)	3 (13)	1.00*
MCS	48.3 ± 7.1	42.7 ± 8.6	0.02	II Incontinence of flatus	6 (28)	7 (29)	
FIQL				III Occasional minor soiling	8 (36)	11 (46)	
Lifestyle	2.6 ± 0.9	2.3 ± 0.9	0.27	IV Frequent major soiling	4 (18)	3 (12)	
Coping/behaviour	2.2 ± 0.8	2.0 ± 0.8	0.56	V Incontinence (required colostomy)	0	0	
Depression/ self-perception	3.2 ± 0.6	2.6 ± 0.7	0.005	Follow-up (months) (range)	21 (8–34)	22 (10–46)	1.00
Embarrassment	2.5 ± 0.7	2.4 ± 0.9	0.64				

Indications résiduelles de l'amputation à Beaujon

- **Tumeurs T4 avec:**
 - Atteinte importante du sphincter externe
 - Envahissement vaginal
- **Tumeur située 1 cm ou plus SOUS la ligne pectinée:**
 - Afin d'éviter une anastomose « colocutanée »
- **Patient de plus de 75 ans et/ou avec mauvaise fonction préopératoire:**
 - AAP ou Hartman bas

Suspicion de réponse complète après radiochimiothérapie



Avant tout
traitement



Après
radiochimiothérapie

Observé dans 15 à 25% des cas

Recommandations actuelles: radiochimio si T3-T4 et/ou N+ du moyen et bas rectum

Systematic review and meta-analysis of outcomes following pathological complete response to neoadjuvant chemoradiotherapy for rectal cancer

British Journal of Surgery 2012; **99**: 918–928

Table 2 Outcomes in 1263 patients with a pathological complete response, determined at a mean follow-up of 55.5 months

Reference	pCR	Interval to surgery (weeks)	Operation (%)	Adjuvant chemotherapy (%)	Distant metastasis (%)	Local recurrence (%)	Overall survival (%)	Disease-free survival (%)
Avallone <i>et al.</i> ¹⁴ (2011)	24	8.2	LAR 87, APR 11, TAE 2	29	4	0	95	95
Capirci <i>et al.</i> ¹⁵ (2008)	536	8.3	LAR 73, APR 22, TAE 5	22.0	8.9	0.9	90.0	85.0
Chan <i>et al.</i> ⁵ (2005)	32	9	LAR 56, APR 44	77	6	0	97	97
Ciccocioppo <i>et al.</i> ¹⁶ (2009)	7	4–6	LAR 55, AR 15, APR 25, Hartmann's 2.5, TPC 2.5	100	0	0	86	100
De Campos-Lobato <i>et al.</i> ⁶ (2011)	54	8	LAR 71, APR 29	33	10	0	93	92
Hong <i>et al.</i> ¹⁷ (2011)	11	7.4	LAR 73, APR 14, TAE 9, Hartmann's 4	100	NR	0	NR	91
Kim <i>et al.</i> ¹⁸ (2011)	58	6	LAR 82, APR 18	97	NR	NR	94	91
Pucciarelli <i>et al.</i> ¹⁹ (2004)	19	6.1	LAR 88, APR 11, Hartmann's 1	56	16	0	68	68
Rödel <i>et al.</i> ²⁰ (2005)	40	6	NR	100	14	0	86	86
Roh <i>et al.</i> ²¹ (2009)	17	NR	LAR 48, APR 52	NR	0	0	88	88
Ruo <i>et al.</i> ²² (2002)	10	4–7	LAR 68, APR 31, pelvic exenteration 1	39	5	0	95	95
Shivnani <i>et al.</i> ²³ (2007)	25	7	PC with CAA 38, LAR 33, APR 27, TPC + IPAA 2	NR	0	0	91	89
Smith <i>et al.</i> ⁸ (2010)	100	4–7	LAR 76, APR 21, <i>en bloc</i> 3	NR	8.0	1.0	90.0	89.8
Valentini <i>et al.</i> ²⁴ (2008)	9	6	LAR 57, APR 40, Hartmann's 3	0	11.0	0	89.0	89.0
Wheeler <i>et al.</i> ²⁵ (2004)	17	6–8	LAR 73, APR 23, local excision 2, no resection 2*	25	18	0	94	94
Yeo <i>et al.</i> ²⁶ (2010)	304	6.6	LAR 85, APR 15	84.2	7.9	2.6	94.8	88.5
Weighted mean			LAR 73.4, APR 22.7, other 3.9	61.4	8.7	0.7	90.2	87.0

Suspicion de réponse complète après radio-chimiothérapie

- **La TME systématique est la règle (+++)**
 - 15-25% de TME « pour rien » ?
- **De plus, les résultats de la TME ne sont pas toujours bons:**
 - Chez les patients âgés et à comorbidités: risque de décès ou de morbidité sévère
 - Dans les cancers du très bas rectum: risque de stomie définitive ou de mauvaise fonction



3 solutions théoriques après radio-chimiothérapie néoadjuvante et suspicion de réponse complète

- **Exérèse totale du mésorectum (+++)**
- Simple surveillance « Wait and See »:
 - Mais diagnostic difficile de la « réponse complète »
- Exérèse locale de la cicatrice:
 - Analyse anatomopathologique (+++)
 - Si mauvais critères histologiques: TME secondaire (+++)



Restaging of Locally Advanced Rectal Cancer With Magnetic Resonance Imaging and Endoluminal Ultrasound After Preoperative Chemoradiotherapy: A Systemic Review and Meta-analysis

Ri-Sheng Zhao, M.D.¹ • Hui Wang, M.D., Ph.D.¹ • Zhi-Yang Zhou, M.D., Ph.D.²
Qian Zhou, M.P.H.³ • Michael W. Mulholland, M.D., Ph.D.⁴

CONCLUSION: Accurate restaging of locally advanced rectal cancer by MRI and endoluminal ultrasound is still a challenge. Identifying T0 rectal cancer by imaging is not reliable. Before performing surgery, restaging is important, but some of the T0-2 patients are likely overestimated as T3-4. Both modalities for lymph node involvement are not very good. Magnetic resonance imaging may be a good method to reassess circumferential resection margin.

Clinical Criteria Underestimate Complete Pathological Response in Rectal Cancer Treated With Neoadjuvant Chemoradiotherapy

Fraser M. Smith, M.D., F.R.C.S.I.¹ • Homer Wiland, M.D.² • Adam Mace, M.D.¹
Rish K. Pai, M.D., Ph.D.² • Matthew F. Kalady, M.D.^{1,3}

Dis Colon Rectum 2014; 57: 311–315

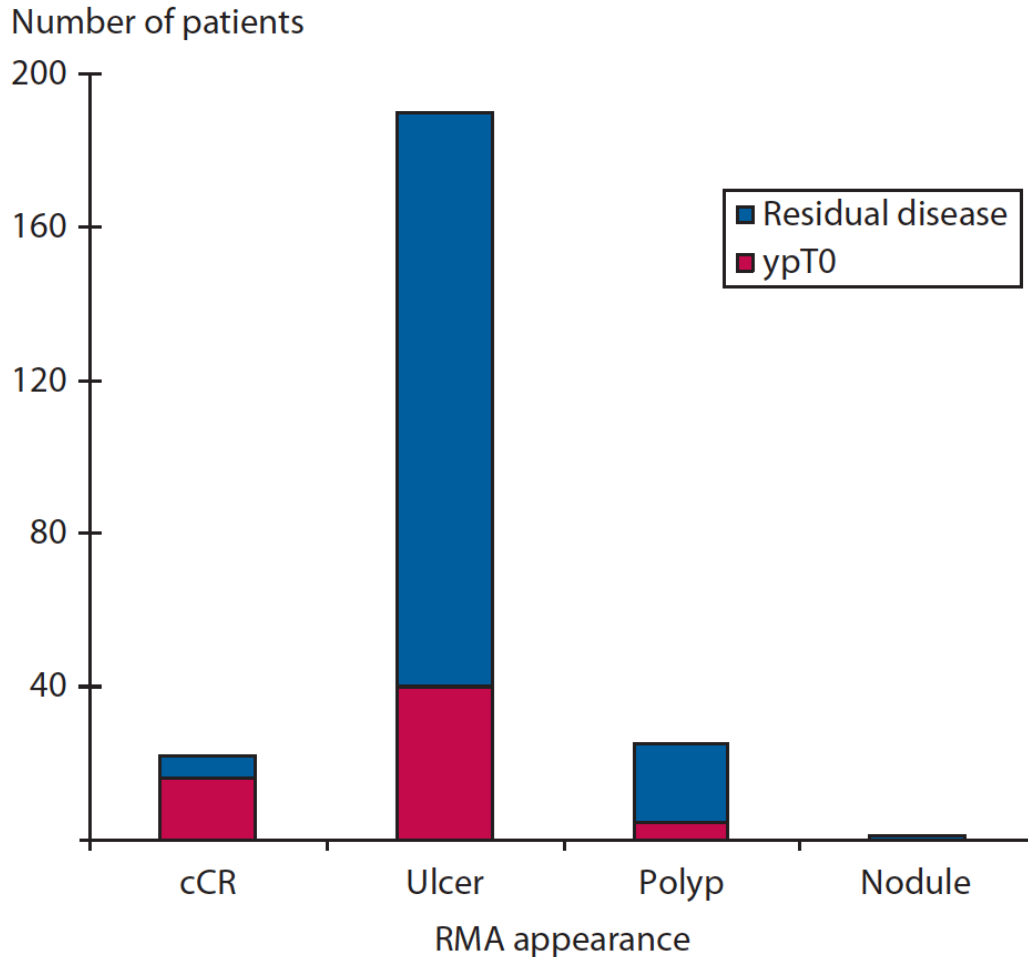


FIGURE 1. Distribution of appearances of residual mucosal abnormalities for patients with residual disease and ypT0. cCR = complete clinical response; RMA = residual mucosal abnormality.

TABLE 1. Association between RMA appearance and ypT0 status

Variable	ypT0		p	OR
	No (n = 177)	Yes (n = 61)		
cCR				
No	171	45	<0.0001 ^a	10.0
Yes	6	16		
Ulcer				
No	27	21	0.0027 ^a	0.35
Yes	150	40		
Polyp				
No	157	56	0.6311	0.70
Yes	20	5		
Nodule				
No	176	61	1	0
Yes	1	0		

cCR = complete clinical response.

^aFisher exact test.

Watch-and-wait approach versus surgical resection after chemoradiotherapy for patients with rectal cancer (the OnCoRe project): a propensity-score matched cohort analysis

Lancet Oncol 2016; 17: 174–83

Andrew G Renehan, Lee Malcomson, Richard Emsley, Simon Gollins, Andrew Maw, Arthur Sun Myint, Paul S Rooney, Shabbir Susnerwala, Anthony Blower, Mark P Saunders, Malcolm S Wilson, Nigel Scott, Sarah T O'Dwyer

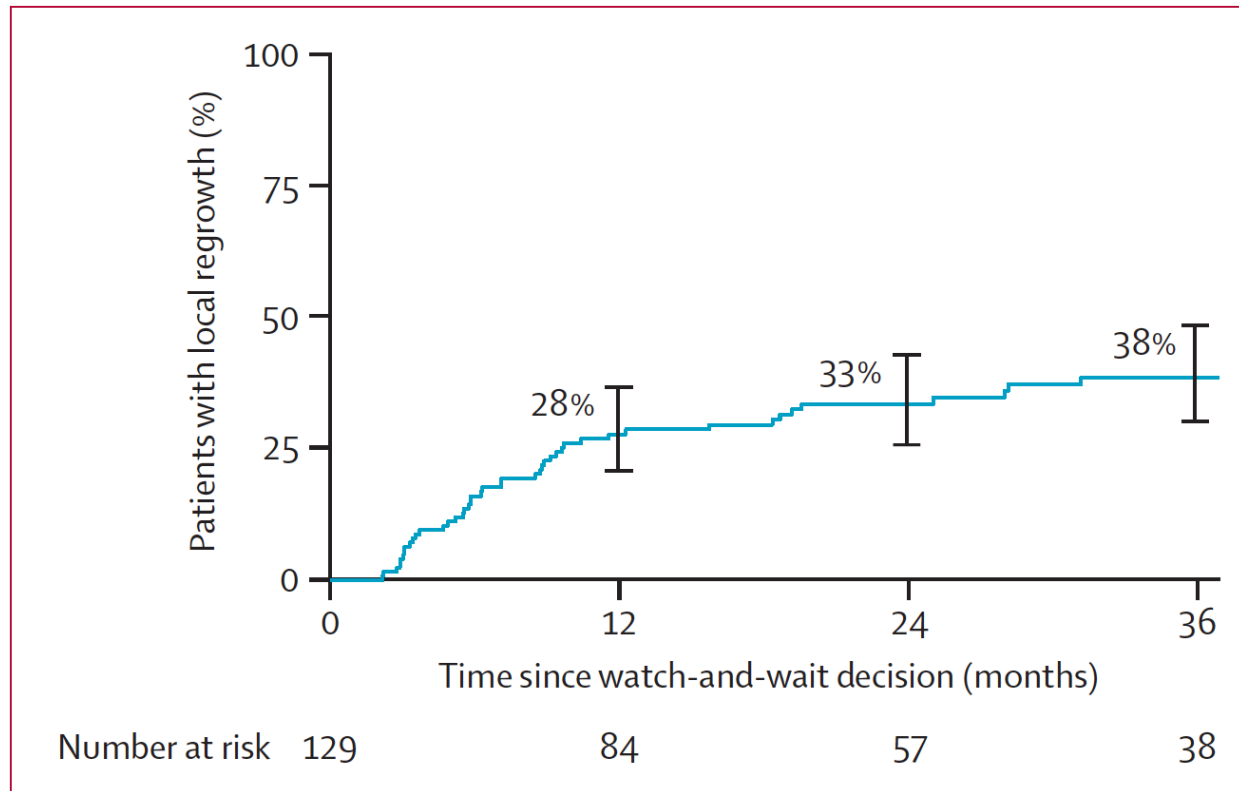


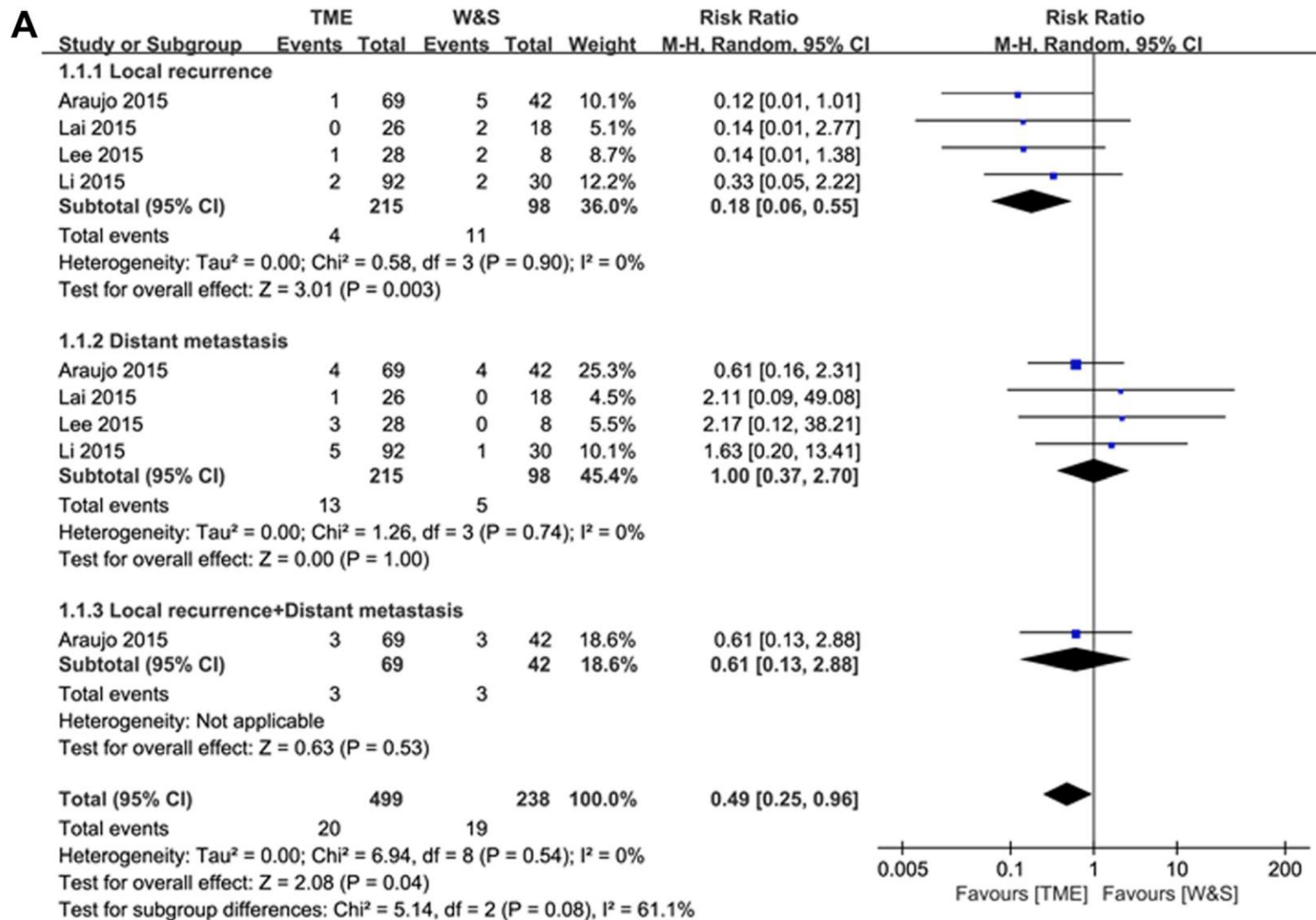
Figure 2: Actuarial local regrowth rates in the 129 patients with a clinical complete response managed by watch and wait

Percentages shown on the graph are actuarial rates at 12, 24, and 36 months after multidisciplinary team decision to watch and wait was made; vertical lines show 95% CI.

Wait and see approach for rectal cancer with a clinically complete response after neoadjuvant concurrent chemoradiotherapy

Hyun Jung Kim^{1,2} · Jin Ho Song^{3,4} · Hyeong Sik Ahn^{1,2} · Bong-Hoi Choi⁵ ·
Hojin Jeong^{3,4} · Hoon Sik Choi³ · Yun Hee Lee^{3,4} · Ki Mun Kang^{3,4} · Bae Kwon Jeong^{3,4}

Int J Colorectal Dis (2017) 32:723–727



Can mesorectal lymph node excision be avoided in rectal cancer surgery?

E. Rullier* and V. Vendrely†

*Department of Surgery, Saint-Andre Hospital, Victor Segalen University of Bordeaux, Bordeaux, France and †Department of Radiotherapy, Saint-Andre Hospital, Victor Segalen University of Bordeaux, Bordeaux, France

Table 2 Results of local excision after downstaged T2/T3 low rectal cancer.

Author [references]	n	cStage	Recurrence (no. of patients)		Follow up (m)
			Local	Distant	
Kim <i>et al.</i> [33]	26	T2T3	1	0	24
Schell <i>et al.</i> [18]	11	T3	0	1	55
Bonnen <i>et al.</i> [34]	23	T3	2	4	60
Lezoche <i>et al.</i> [35]	100	T2T3	5	2	55
Caricatto <i>et al.</i> [36]	8	T2T3	1	0	37
Nair <i>et al.</i> [37]	44	T2T3	4	5	64
Total	175	T2T3	13 (7%)	12 (7%)	

**Discuter exérèse locale uniquement si aucun
bourgeon, aucune ulcération (+++)**



**Une réponse « très importante » n'est pas
une indication à l'exérèse locale (+++):**

Indications d'exérèse locale à Beaujon

- **Avant les résultats des essais randomisés**
(GRECCAR 2)
- **Uniquement à des patients très sélectionnés**
 - Suspicion de réponse complète après RCT (clinique et IRM):
 - Aucun tumeur résiduelle même petite
 - Mais aussi si:
 - Indication d'amputation ou de RIS totale
 - Ou patient âgé et/ou comorbidités

Is there a place for organ preservation in infiltrating rectal cancer?

G. MANCEAU, Y. PANIS

TABLE I.—*Relationship between ypT and ypN stage after neoadjuvant chemoradiotherapy for rectal cancer.*

Authors	Year	Number of patients	Number of patients with nodal metastasis / Total number of patients (% ypN+)				
			ypT0	ypT1	ypT2	ypT3	ypT4
Read TE <i>et al.</i> ²⁴	2004	644	1/42 (2)	2/45 (4)	43/186 (23)	158/339 (47)	16/33 (48)
Bujko K <i>et al.</i> ²⁷	2005	134	1/21 (5)	1/12 (8)	13/50 (26)	28/51 (55)	
Pucciarelli S <i>et al.</i> ²⁸	2005	235	1/56 (2)	2/13 (15)	14/83 (17)	28/74 (38)	3/9 (33)
Kim DW <i>et al.</i> ²⁶	2006	282	1/45 (2)	1/13 (8)	13/77 (17)	69/140 (49)	3/7 (43)
Guillem JG <i>et al.</i> ²⁹	2008	188	1/37 (3)	1/15 (7)	12/60 (20)	27/76 (36)	
Mignanelli ED <i>et al.</i> ²⁰	2010	242	2/61 (3)	1/9 (11)	14/48 (30)	44/118 (37)	0/6 (0)
Park IJ <i>et al.</i> ²⁵	2013	406	13/142 (9)	12/70 (17)	41/192 (21)	NR	NR
Total		2131	20/404 (5)	20/177 (11)	150/696 (22)	376/948 (40)	

pCR: pathologic complete response; NR: not reported

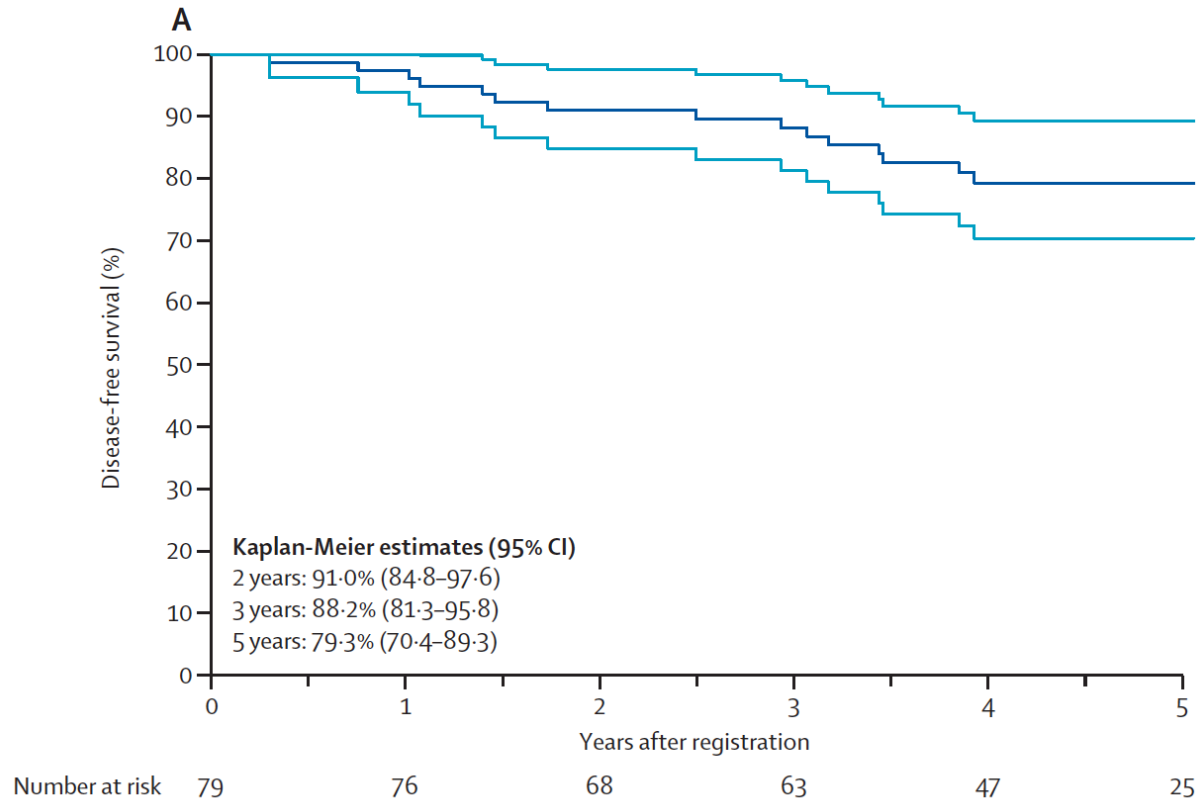
Organ preservation for clinical T2N0 distal rectal cancer using neoadjuvant chemoradiotherapy and local excision (ACOSOG Z6041): results of an open-label, single-arm, multi-institutional, phase 2 trial

Lancet Oncol 2015

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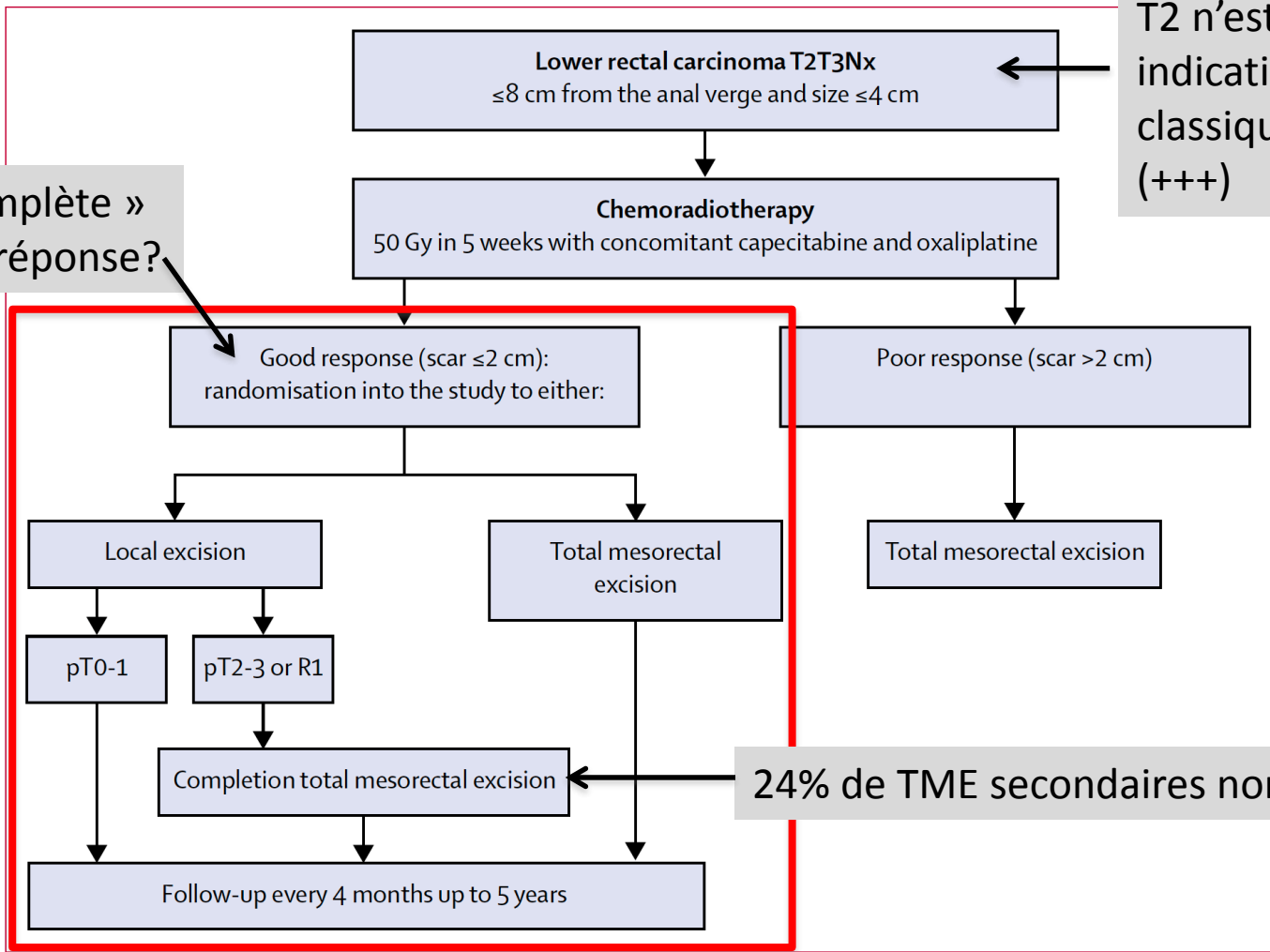
Interpretation Although the observed 3-year disease free survival was not as high as anticipated, our data suggest that neoadjuvant chemoradiotherapy followed by local excision might be considered as an organ-preserving alternative in carefully selected patients with clinically staged T2N0 tumours who refuse, or are not candidates for, transabdominal resection.

Organ preservation for rectal cancer (GRECCAR 2): a prospective, randomised, open-label, multicentre, phase 3 trial

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Réponse « complète »
ou « bonne » réponse?

T2 n'est pas une
indication
classique de RCT
(+++)

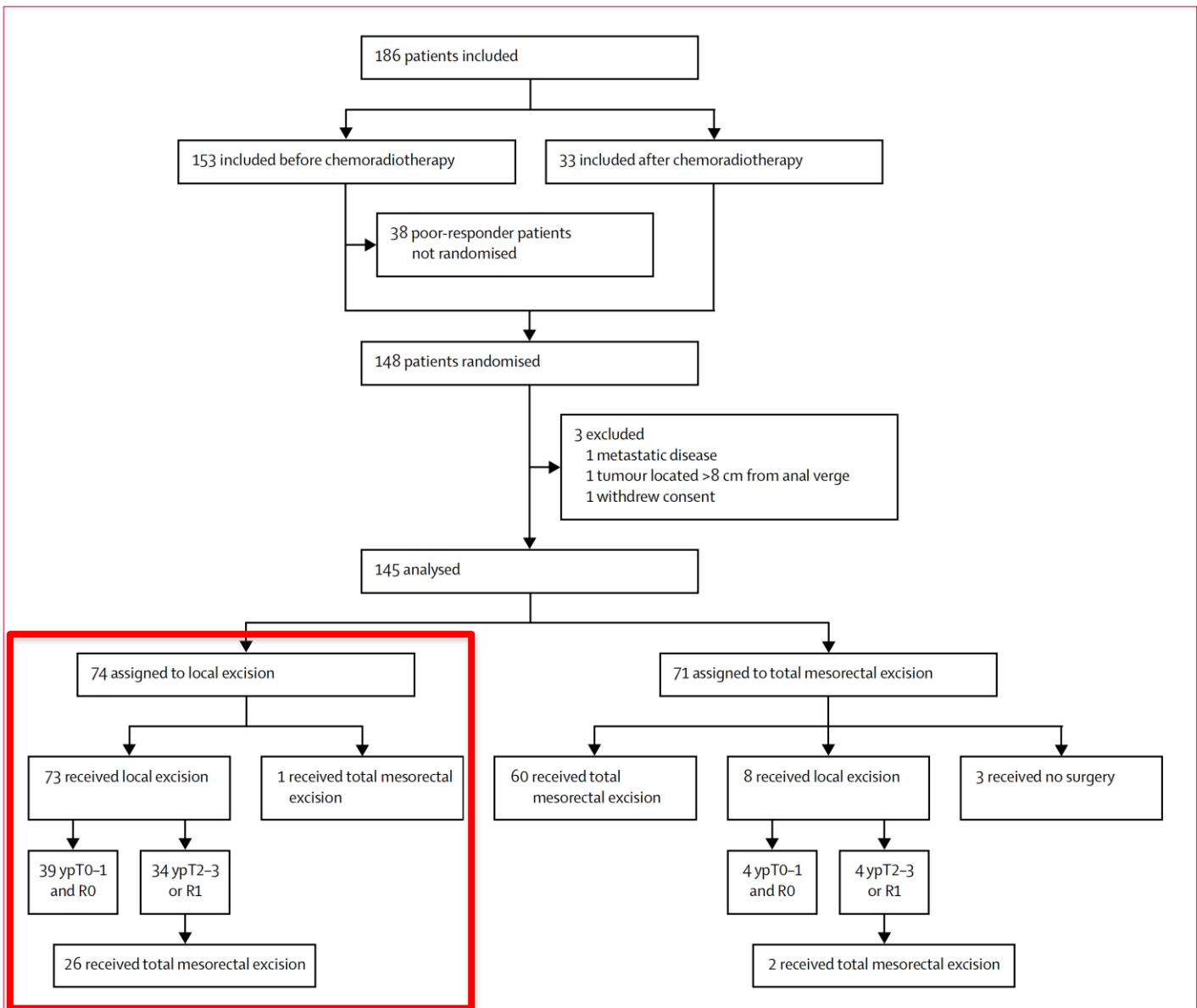


24% de TME secondaires non faites (+++)

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www.thelancet.com Published online June 7, 2017



**Organ preservation for rectal cancer (GRECCAR 2):
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	Local excision (n=74)*	Total mesorectal excision (n=71)*	Odds ratio (95% CI)	p value†
Primary outcome: composite of death, tumour recurrence, morbidity, and side-effects at 2 years				
One or more events present	41/73 (56%)	33/69 (48%)	1.33 (0.62–2.86)	0.43
Details of composite outcome				
Death	4/74‡ (5%)	4/71‡ (6%)	0.98 (0.18–5.24)	0.98
Tumour recurrence	11/71 (16%)	14/70 (20%)	0.81 (0.32–2.03)	0.63
Major morbidity	17/70 (24%)	15/69 (22%)	1.18 (0.51–2.72)	0.68
Side-effects total	24/69 (35%)	19/65 (29%)	1.29 (0.53–3.14)	0.54
Colostomy	9/70 (13%)	5/68 (7%)	1.76 (0.61–5.02)	0.27
Faecal incontinence§	3/62 (5%)	9/65 (14%)	0.60 (0.20–1.82)	0.34
Sexual dysfunction	17/73 (23%)	12/67 (18%)	1.10 (0.46–2.64)	0.81

*Frequency varies because proportions in the two groups are based on available data. †p values were based on a modified intention-to-treat comparison, in which missing data were replaced by occurrence of the event (missing=failure) and adjusted on centres, tumour, and nodal stages. ‡No postoperative deaths. §Assessed in patients without previous colostomy.

Table 2: Primary composite outcome at 2 years (modified intention-to-treat analysis)

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	Local excision	Total mesorectal excision	Hazard ratio (95% CI)	p value*
Modified intention-to-treat population	n=74	n=71	NA	NA
Local recurrence†	4 (5%)	4 (6%)	0.74 (0.18–3.07)	0.68
Metastatic recurrence†	9 (12%)	12 (17%)	0.68 (0.25–1.82)	0.44
Uncontrolled local recurrence†	1 (1%)	3 (4%)	0.24 (0.02–2.30)	0.21
Disease-free survival‡	58 (78%)	54 (76%)	0.75 (0.35–1.60)	0.45
Overall survival‡	68 (92%)	65 (92%)	1.06 (0.30–3.71)	0.92
Per-protocol population	n=81	n=61	NA	NA
Local recurrence†	5 (6%)	2 (3%)	1.58 (0.25–9.77)	0.63
Metastatic recurrence†	12 (15%)	8 (13%)	0.68 (0.24–1.93)	0.47
Uncontrolled local recurrence†	1 (1%)	2 (3%)	0.34 (0.03–4.44)	0.41
Disease-free survival‡	61 (75%)	50 (82%)	0.92 (0.40–2.12)	0.84
Overall survival‡	72 (89%)	58 (95%)	1.82 (0.46–7.26)	0.40

NA=not applicable. *Comparisons adjusted for centres, tumour, and nodal stages for modified intention-to-treat analyses and further adjustments for pathological tumour response for per-protocol analyses. †Absolute numbers correspond to occurrence of the event at 3 years. ‡Absolute numbers correspond to absence of the event at 3 years.

Table 3: Oncological outcomes at 3 years (Kaplan Meier)

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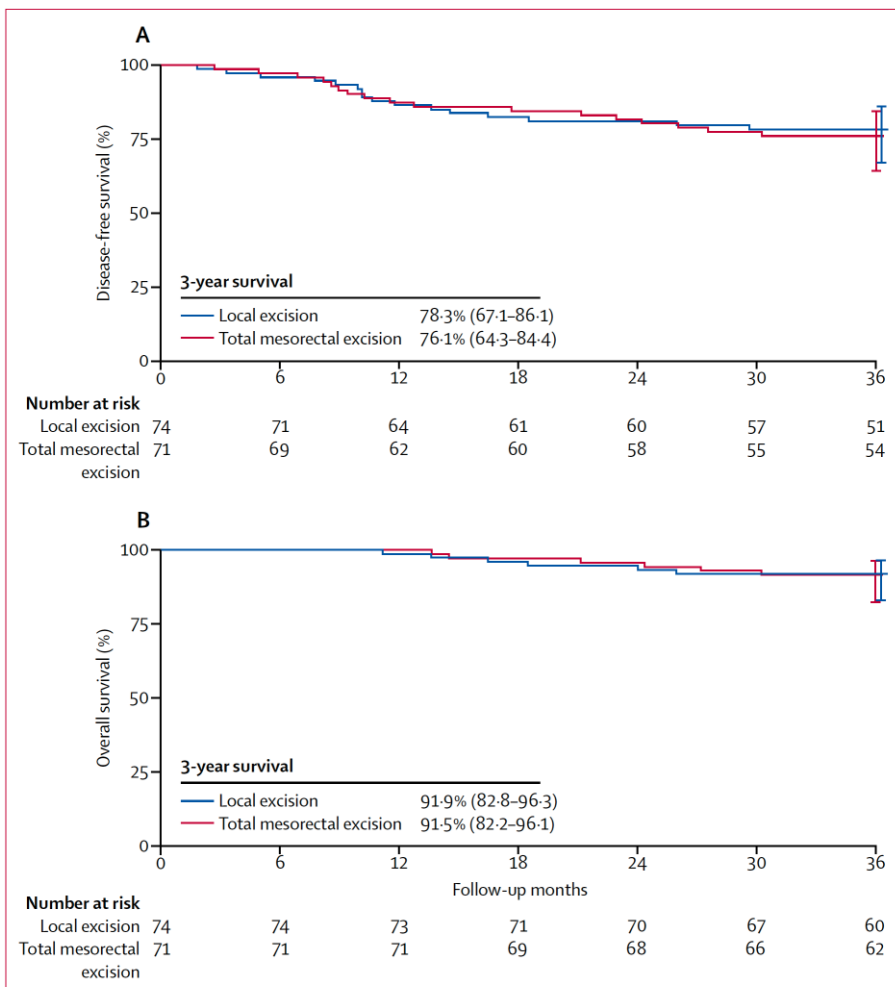


Figure 3: Survival after local excision versus total mesorectal excision

	Local excision (n=53)*	Total mesorectal excision (n=61)*	Local excision plus completion total mesorectal excision (n=28)*	p value†
Major morbidity or side-effects total	14/48 (29%)	22/58 (38%)	21/27 (78%)	0.0001
Major morbidity (Dindo III-V)	6/48 (12%)	13/60 (22%)	13/28 (46%)	0.0031
Early morbidity (1 month)	3/53 (6%)	6/61 (10%)	7/28 (25%)	0.0291
Late morbidity (up to 2 years)	3/48 (6%)	10/60 (17%)	8/28 (29%)	0.0322
Side-effects	9/48 (19%)	17/57 (30%)	16/27 (59%)	0.0013
Definitive colostomy	2/48 (4%)	5/59 (9%)	7/28 (25%)	0.0178
Faecal incontinence‡	0	9/56 (16%)	3/22 (14%)	0.0056
Sexual dysfunction	7/53 (13%)	10/58 (17%)	11/27 (41%)	0.0113
Details of major morbidity				
Pelvic abscess or leakage	2 (4%)§	6 (10%)	8 (29%)	NA
Pelvic haematoma	0	0	1 (4%)	NA
Small bowel obstruction	0	1 (2%)	3 (11%)	
Colonic ischaemia	0	3 (5%)	0	NA
Vaginal stenosis	0	1 (2%)	0	NA
Rectal bleeding after local excision	2 (4%)	0	0	NA
Anastomotic coloanal stenosis	0	1 (2%)	1 (4%)	NA
Prolapse of ileostomy	0	1 (2%)	0	NA
Late rectal stenosis after local excision	1 (2%)	0	0	NA
Cardiac arrhythmia	1 (2%)	0	0	NA
Cerebrovascular accident		1 (2%)		
Pulmonary embolism	0	0	1 (4%)	NA
Overall major morbidity (number)	6 (11%)	13 (21%)	13 (46%)	NA
Overall major morbidity (number/total number)	6 (11%)	14 (23%)	14 (50%)	NA

NA=not applicable. *Proportions in the two groups based on available data. †p values based on a per-protocol comparison without replacement of missing data or adjustments. ‡Assessed in patients without previous colostomy for another cause of incontinence. §Complications after salvage total mesorectal excision.

Table 4: Morbidity and side-effects at 2 years according to type of surgery (post-hoc exploratory analysis)

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Interpretation We failed to show superiority of local excision over total mesorectal excision, because many patients in the local excision group received a completion total mesorectal excision that probably increased morbidity and side-effects, and compromised the potential advantages of local excision. Better patient selection to avoid unnecessary completion total mesorectal excision could improve the strategy.

A Systematic Review of Local Excision After Neoadjuvant Therapy for Rectal Cancer: Are ypT0 Tumors the Limit?

Sally Hallam, B.Med.Sci., M.B.Ch.B., M.R.C.S.
David E. Messenger, B.Med.Sci., M.B.Ch.B., F.R.C.S
Michael G. Thomas, B.Sc., M.S., F.R.C.S.

Dis Colon Rectum 2016; 59: 984–997

TABLE 4. Local recurrence according to ypT category where completion radical surgery was not performed

Study	ypT0		ypT1		ypT2		ypT3		≥ypT1		Follow-up median (range), mo
	No. of patients	No. with LR, n (%)	No. of patients	No. with LR, n (%)	No. of patients	No. with LR, n (%)	No. of patients	No. with LR, n (%)	No. of patients	No. with LR, n (%)	
Bannon et al ²¹	13	3 (23.1)	17	1 (5.9)	12	0 (0)	2	2 (100)	31	3 (9.7)	36.0 (2.0–94.0) ^a
Kim et al ²²	17	0 (0)	NS	NS	NS	NS	NS	NS	7	1 (14.3)	19.0 (6.0–77.0)
Ruo et al ²³	3	0 (0)	–	–	5	1 (20.0)	1	0 (0)	6	1 (16.7)	28.5 (2.0–89.0)
Hershman et al ²⁴	7	0 (0)	11	1 (9.1)	11	2 (18.2)	4	1 (25.0)	26	4 (15.4)	45.0 (NS)
Nair et al ²⁵	25	1 (4.0)	NS	NS	NS	NS	NS	NS	14	2 (14.3)	64.0 (6.0–153.0)
Callender et al ²⁶	23	0 (0)	NS	NS	NS	NS	NS	NS	24	5 (20.8)	63.0 (9.0–178.0)
Belluco et al ²⁷	17	0 (0)	NS	NS	NS	NS	NS	NS	12	3 (25.0)	NS
Kennelly et al ²⁹	6	0 (0)	3	0 (0)	1	0 (0)	–	–	4	0 (0)	24.0 (9.0–42.0)
Issa et al ³⁰	23	0 (0)	–	–	–	–	–	–	–	–	87.0 (26.0–140.0)
Perez et al ³²	3	0 (0)	6	1 (16.7)	18	3 (16.7)	–	–	24	4 (16.7)	15.0 (6.0–32.0)
Bujko et al ³³	39	4 (10.3)	–	2 (7.7)	–	4 (36.4)	5	3 (60.0)	–	9 (21.4)	24.0 (2.0–85.0)
Puciarelli et al ³⁵	42	0 (0)	NS	NS	NS	NS	NS	NS	9	2 (22.2)	NS
Lee et al ³⁶	15	1 (6.7)	NS	NS	NS	NS	NS	NS	12	2 (16.7)	81.8 (28.6–138.5)
Noh et al ³⁷	10	1 (10.0)	6	1 (16.7)	1	0 (0)	–	–	7	1 (14.2)	75.0 (22.0–126.0)
Stipa et al ³⁹	13	0 (0)	4	1 (25.0)	15	7 (46.7)	11	9 (81.8)	30	17 (56.7)	81.0 (2.0–240.0)
Verseveld et al ⁴⁰	21	0 (0)	9	1 (11.1)	9	3 (33.3)	–	–	18	1 (22.2)	17.0 (12.0–22.0)
Pooled LR (95% CI)	277	4.00% (1.9–6.9)	82	12.10% (6.3–19.4)	83	23.60% (13.0–36.1)	23	59.60% (32.6–83.8)	239	21.9% (15.9–28.5)	

LR = local recurrence;

^aData include the mean value.

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TABLE 3. Summary of studies assessing concordance between the clinical and pathological response to neoadjuvant therapy

<i>Authors</i>	<i>Staging modality postneoadjuvant therapy</i>	<i>Sensitivity</i>	<i>Specificity</i>	<i>Positive predictive value</i>	<i>Negative predictive value</i>
Kim et al ²²	ERUS, endoscopy	17/17 = 100 %	4/9 = 44.4%	17/22 = 77.3%	4/4 = 100%
Nair et al ²⁵	ERUS, endoscopy	19/25 = 76.0%	7/19 = 36.8%	19/31 = 61.3%	7/13 = 53.8%
Garcia-Aguilar et al ²⁸	endoscopy	29/34 = 85.3%	29/43 = 67.4%	29/43 = 67.4%	29/34 = 85.3%
Bujko et al ³³	DRE alone	20/39 = 51.3%	38/50 = 76.0%	20/32 = 62.5%	38/57 = 66.7%
Pooled value (95% CI)		80.0% (56.5–95.7)	59.2% (41.5–75.7)	66.0% (57.8–73.8)	73.9% (57.3–87.6)

ERUS = endoscopic rectal ultrasound; DRE = digital rectal examination.

CONCLUSIONS: Local excision after neoadjuvant therapy should only be considered a curative treatment if complete pathological response is obtained. Given the high rate of local recurrence among incomplete responders, future studies should focus on predicting patients who will achieve complete pathological response.

Management of rectal cancer: the 2016 French guidelines

Z. Lakkis*, G. Manceau†, V. Bridoux‡,
A. Brouquet§, S. Kirzin¶, L. Maggiori**,
C. de Chaisemartin††, J. H. Lefevre‡‡ and
Y. Panis** on behalf of the French Research
Group of Rectal Cancer Surgery (GRECCAR)
and the French National Society of
Coloproctology (SNFCP)

Statement 2: Evaluation of tumour response after CRT

No diagnostic strategy allows a precise prediction of the histopathological response to CRT (Grade B). A complete response can be suspected only if based on several staging modalities (Grade C). MRI after CRT is the best form of imaging to evaluate the response to CRT. This should be performed as late as possible after the end of CRT and therefore just before TME [48] (Grade B). Functional imaging might improve these results, but is currently not recommended (Grade C).

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Statement 3: Watch-and-wait strategy

Habr-Gama *et al.* reported promising results of a watch-and-wait strategy after CRT in the case of a clinical complete response [49]. But poorer results have been reported by other teams [50]. In the absence of RCTs, **this strategy cannot be routinely recommended** (Grade B), but could possibly be applied to selected patients with informed consent within a registry.

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Statement 4: Local excision after CRT

The encouraging results of Phase II trials suggest that this strategy could be considered only in highly selected patients with suspicion of a complete or near complete tumour response after CRT and (i) significant comorbidity making radical surgery risky or contraindicated, (ii) patient refusal of APR, and (iii) theoretical indication of APR or total ISR [51].

Pending the long-term RCT results, the gold-standard treatment remains TME regardless of the response to CRT (Grade A).

Exérèse Locale après radiochimiothérapie néoadjuvante

- **Technique la plus sûre pour la « préservation d'organe »**
 - Permet un examen anatomopathologique
- **Mais encore beaucoup de problèmes (+++)**
 - Seulement pour des patients sélectionnés ou pour tout patient avec suspicion de réponse complète ?
 - Très difficile de diagnostiquer une « réponse complète »
 - Danger de faire une exérèse locale pour une « petite tumeur persistante »:
 - Avec des très mauvais résultats oncologiques
 - La TME secondaire peut être refusé par le patient:
 - Car l'exérèse locale après RCT est très douloureuse (+++)
 - Et associée avec une lourde morbidité:
 - Et un risque plus élevé d'AAP secondaire

L'expérience de Beaujon (2005-2013)

- **Impact de ces progrès dans la prise en charge du cancer du bas rectum:**
 - Résection inter-sphinctérienne:
 - Avec anastomose ultra basse
 - Préservation d'organe chez des patients sélectionnés avec suspicion de réponse complète après RCT:
 - Exérèse locale de la cicatrice

Ces progrès ont-ils modifiés le taux d'amputation abdomino-périnéale ?

Cancer du rectum

- **Taux de stomie définitive dans le cancer du rectum:**
 - Dutch trial: **35%**
 - COLOR II study: **27%**
 - CLASICC Trial: **25%**
 - Étude de population aux USA (2011): **51%**
 - Études récentes de centres experts: **18-23%**



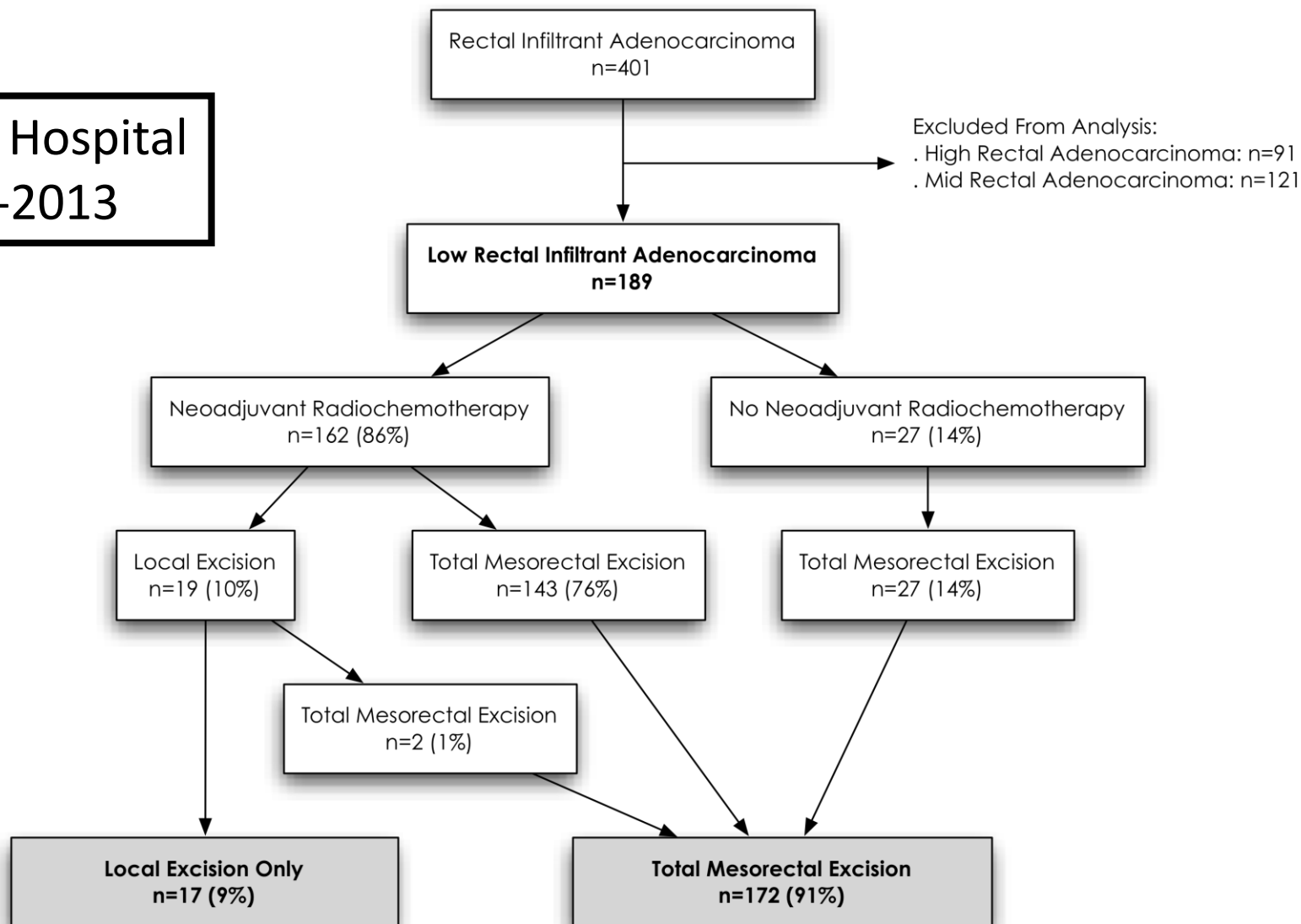
Toward the End of Abdominoperineal Resection for Rectal Cancer?

An 8-Year Experience in 189 Consecutive Patients With Low Rectal Cancer

Amélie Chau, MD,* Léon Maggiori, MD,* Clotilde Debove, MD,* Frédéric Kanso, MD,*
Christophe Hennequin, MD,† and Yves Panis, MD, PhD*

Ann Surg 2014;260:801–806

**Beaujon Hospital
2005-2013**



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TABLE 1. Characteristics of 189 Patients Treated for Infiltrant Low Rectal Cancer

	n = 189
Sex	
Female	73 (39)*
Male	116 (61)
Age, yr	66 ± 6 (30–90)†
Neoadjuvant RCT	
Yes	162 (86)
No	27 (14)
Surgical procedures	
Laparoscopic TME	172 (90)
Conversion into laparotomy	5 (3)
Operative procedure	
Colorectal anastomosis	26 (15)
Coloanal anastomosis with partial ISR	92 (53)
Coloanal anastomosis with total ISR	32 (19)
Low Hartmann procedure	1 (1)
APR	21 (12)
pTNM stage	
Stage 0 (T0-Tis-N0)	38 (20)
Stage 1 (T1-T2 N0)	55 (29)
Stage 2 (T3-T4-N0)	43 (23)
Stage 3 (all T-N+)	53 (28)
Stage 4 (M+)	19 (10)
LE	19 (10)
LE only	17 (89)
Immediate secondary TME	2 (11)‡

*The number of cases (% of cases).

†Mean + SD (range).

‡These 2 patients were included in the 172 laparoscopic TME.

TABLE 2. Characteristics of 19 Patients With Low Rectal Cancer Undergoing LE After Neoadjuvant RCT

	n = 19
Sex	
Female	10 (53)*
Male	9 (47)
Age, yr	70 (47–90)
Theoretical indication of	
APR	5 (26)
Coloanal anastomosis with total ISR	14 (74)
Reasons for LE	
Suspicion of CTR	19/19 (100)
Age >75 yr	5 (26)
Severe comorbidities	
Patient refusing definitive stoma	5 (26)
Operative procedures	
Transanal endoscopic microsurgery	5 (26)
Transanal approach	14 (74)
Pathological examination	
T0-Tis-T1-N0-R0	13 (69)
T1NxR1	1 (5)
T2NxR0	2 (11)
T2NxR1	2 (11)
T3NxR0	1 (5)
Rectal surgery after LE	
Yes	2 (11)
Coloanal anastomosis with total ISR	1
APR	1
No	17 (89)

*The number of cases (% of cases).

Toward the End of Abdominoperineal Resection for Rectal Cancer?

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TABLE 3. Oncological Outcomes According to Surgical Procedure in 189 Patients With Low Rectal Cancer

	CRA (n = 26)	pCAA (n = 92)	tCAA (n = 32)	APR (n = 21)	LE* (n = 17)	Hartmann (n = 1)	Overall (N = 189)
Local recurrence	0 (0)†	8 (9)	1 (3)	0 (0)	2 (12)	0 (0)	11 (6)
Distant recurrence	5 (19)	13 (14)	7 (22)	8 (38)	1 (6)	1 (100)	35 (19)
Both recurrence	0 (0)	2 (2)	3 (9)	0 (0)	0 (0)	1 (100)	6 (3)
Death	0 (0)	2 (2)	1 (3)	1 (5)	0 (0)	0 (0)	4 (2)

*After exclusion of 2 patients treated by immediate secondary TME.

†The number of cases (% of cases).

pCAA indicates coloanal anastomosis with partial ISR; tCAA, coloanal anastomosis with total ISR.

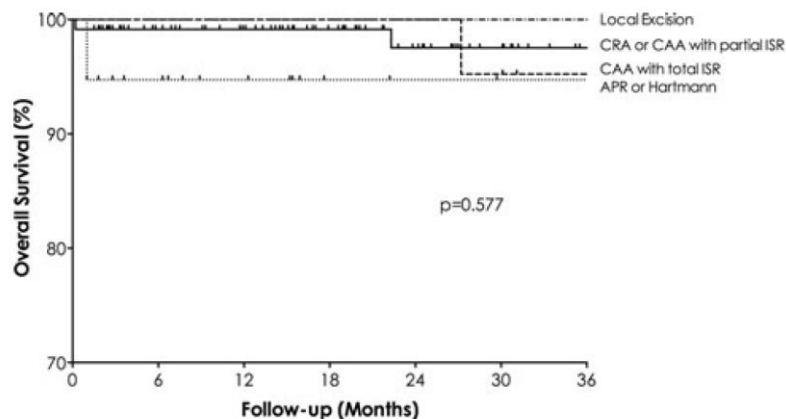


FIGURE 1. Overall survival curves, according to surgical procedure, of 189 consecutive patients with low rectal cancer.

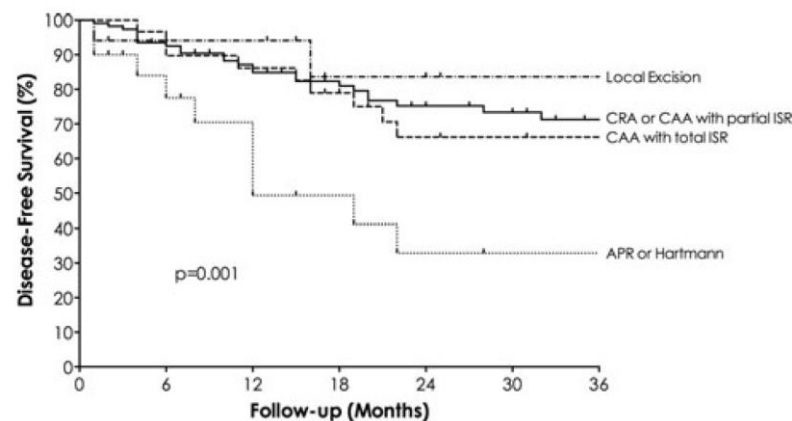
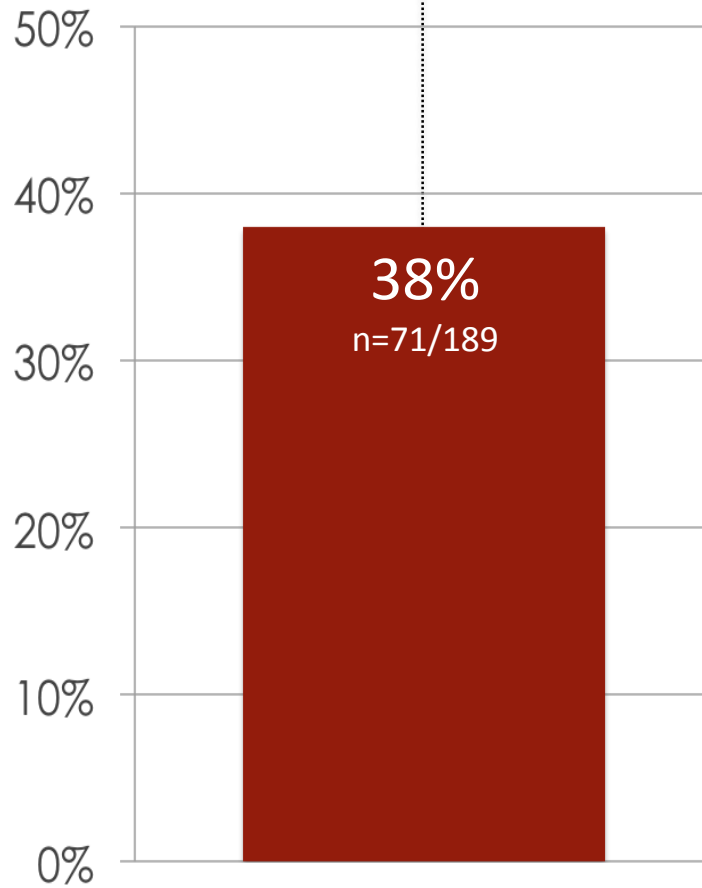


FIGURE 2. Disease-free survival curves, according to surgical procedure, of 189 consecutive patients with low rectal cancer.

TAUX DE STOMIE DEFINITIVE

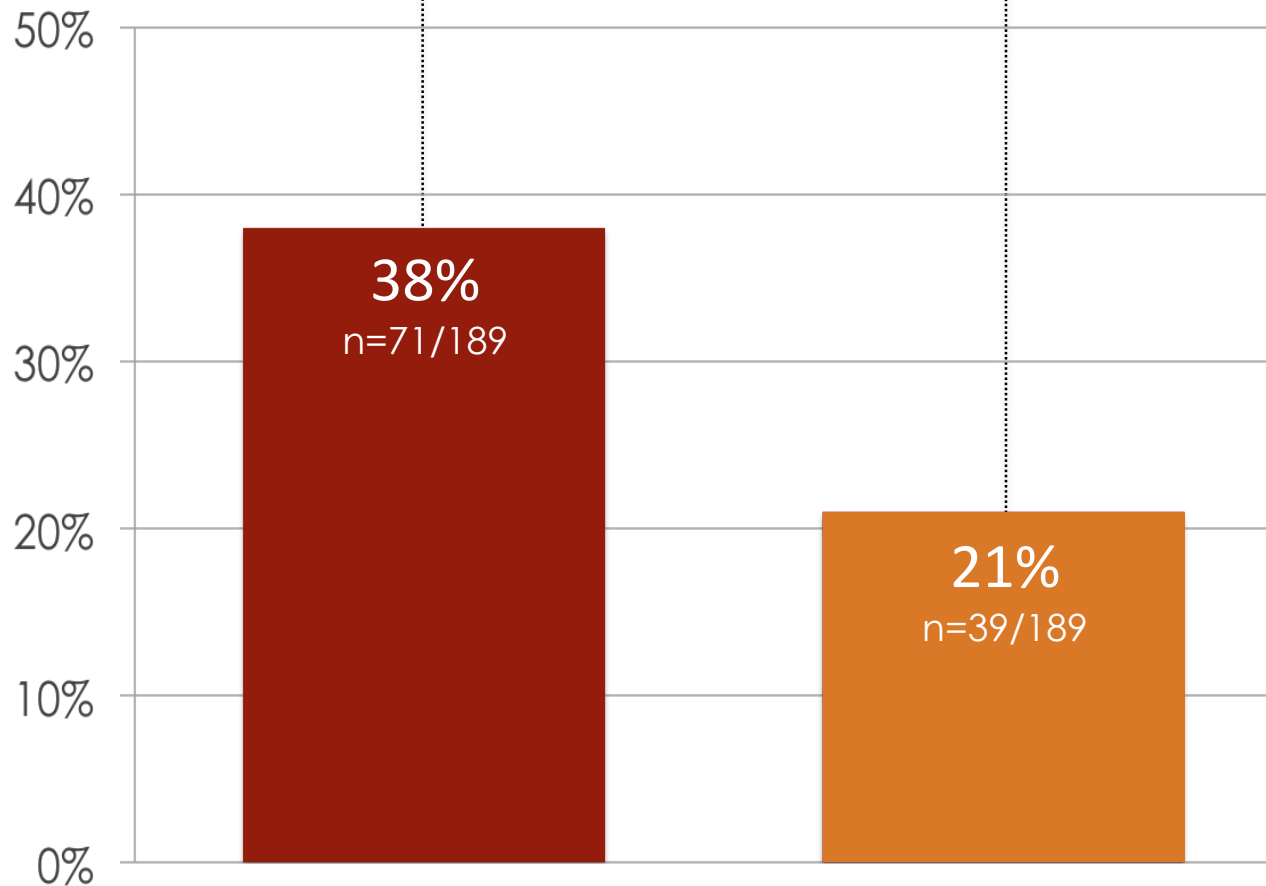
Anastomoses « standards »
ACR et ACA



TAUX DE STOMIE DEFINITIVE

Anastomoses « standards »
ACR et ACA

Idem + Résection
inter-sphinctérienne

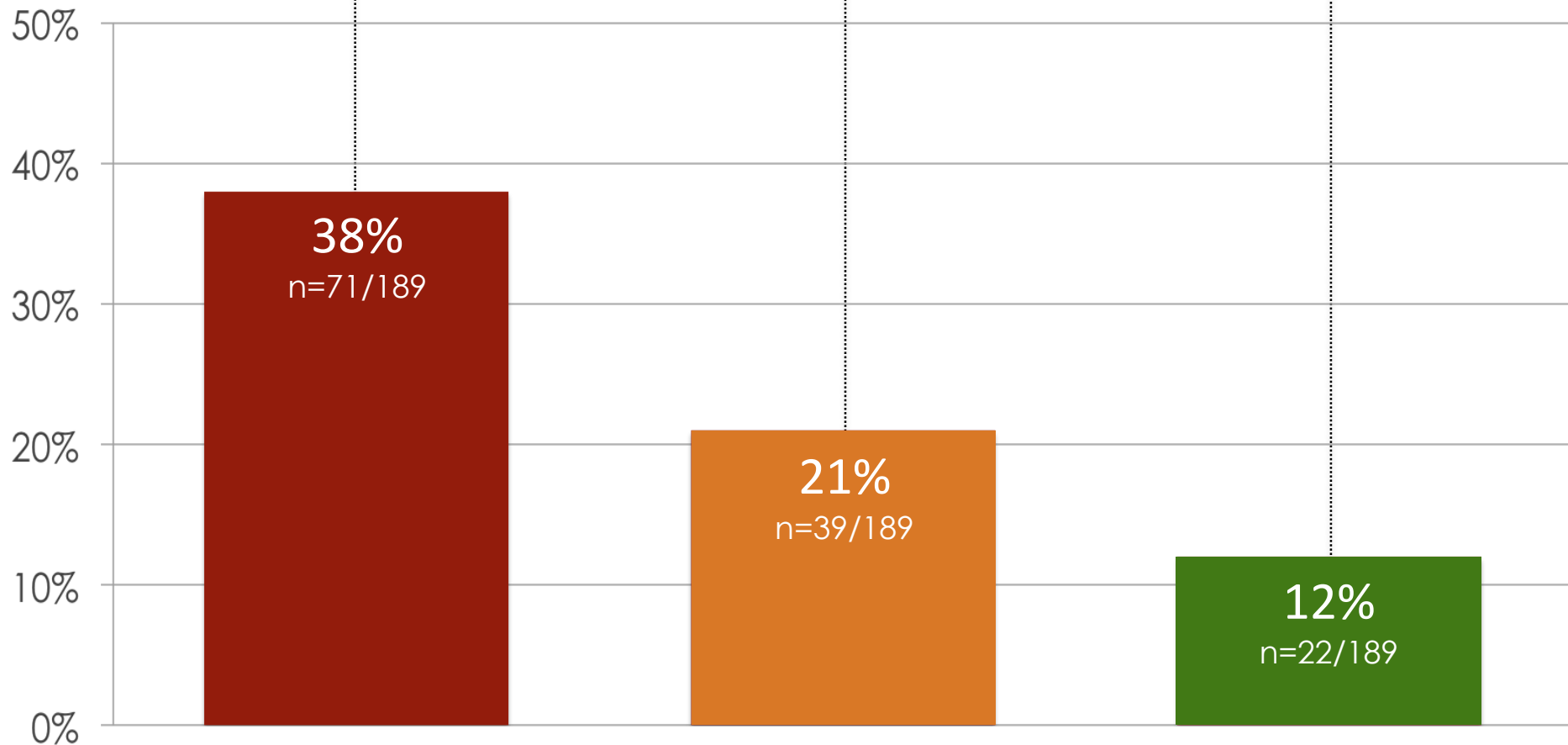


TAUX DE STOMIE DEFINITIVE

Anastomoses « standards »
ACR et ACA

Idem + Résection
inter-sphinctérienne

Idem + Exérèse locale
après RCT



CONCLUSIONS

- Aujourd'hui, le « meilleur » traitement du cancer du rectum doit tenir compte de:
 - Un bon résultat oncologique
 - Mais aussi une bonne qualité de vie (sans stomie ? Bonne fonction ?)
 - Et le meilleur résultat opératoire
- **C'est pourquoi la résection intersphinctérienne et l'exérèse locale doivent être discutées**

CONCLUSIONS

- **Dans les cancers du bas et moyen rectum, 90% des patients (au moins) doivent avoir une TME systématique (+++)**
 - Laparoscopie (+++)
 - Si nécessaire: résection intersphinctérienne:
 - Limite le risque de stomie définitive
 - Bon résultat carcinologique mais fonction parfois mauvaise:
 - Donc sujet < 75 ans et bonne fonction préopératoire

CONCLUSIONS

- **Dans les cancers du bas et moyen rectum, la préservation d'organe après radio-chimiothérapie:**
 - N'est pas actuellement validée (+++)
 - Attendre des progrès dans le diagnostic(+++)
 - L'exérèse locale pourrait être proposée à des patients très sélectionnés:
 - Âgé, avec comorbidités
 - Indication d'amputation ou de RIS totale