

Η ΕΚΤΑΣΗ ΤΟΥ ΛΕΜΦΑΔΕΝΙΚΟΥ ΚΑΘΑΡΙΣΜΟΥ ΣΤΟ ΓΑΣΤΡΙΚΟ ΚΑΡΚΙΝΟ

Δημήτριος Θεοδώρου
Χειρουργός

Μονάδα Χειρουργικής Ανωτέρου Πεπτικού

*Ά Προπ Χειρουργική Κλινική ΕΚΠΑ
Διευθυντής: Καθ Γ Ζωγράφος*

Θεωρία

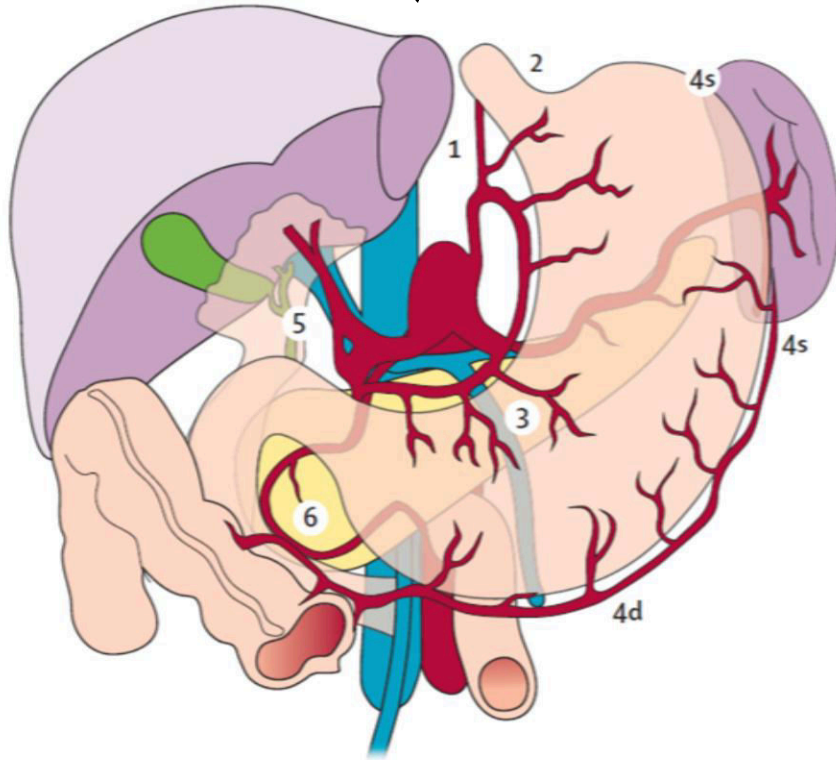
Lymph Node Involvement in Gastric Cancer for Different Tumor Sites and T Stage

Italian Research Group for Gastric Cancer (IRGGC) Experience

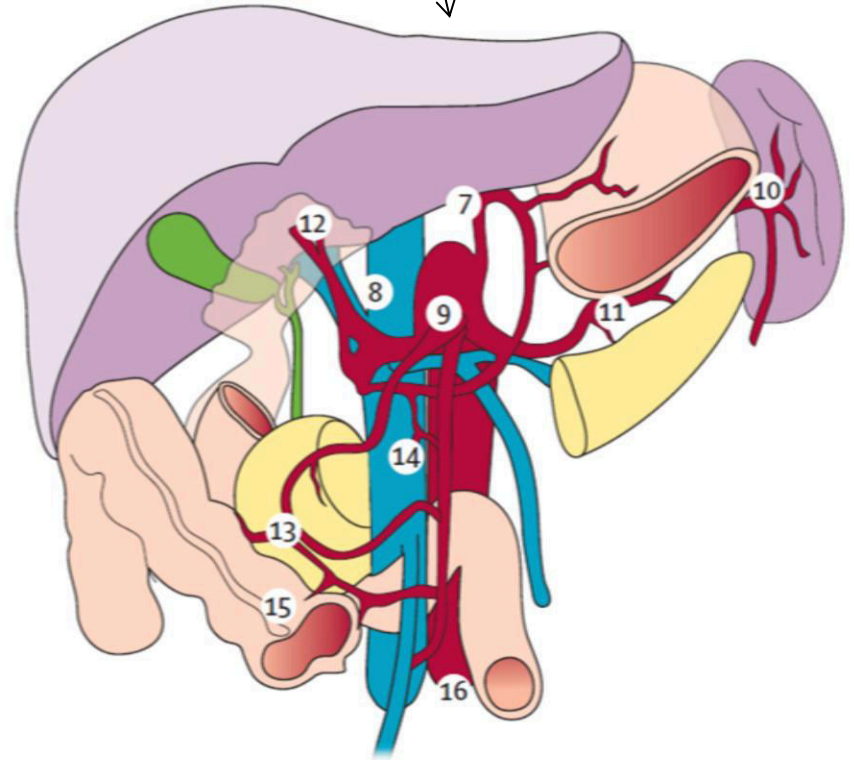
Alberto Di Leo • Daniele Marrelli • Franco Roviello •
 Marco Bernini • AnnaMaria Minicozzi •
 Simone Giacomuzzi • Corrado Pedrazzani •
 Luca Gian Baiocchi • Giovanni de Manzoni

	Upper Third (n=102) (%)	Middle Third (n=160) (%)	Lower Third (n=247) (%)	Total (N=509) (%)	P Value
Lymphadenectomy					
D2	45 (44)	87 (54)	152 (62)	284 (57)	P=0.011
D3	57 (56)	73 (46)	95 (38)	225 (44)	
Mean age (range)	65 (30–90)	64 (30–89)	64 (23–92)	64 (23–92)	P=N.S.
Gender (M:F)	82:20 (4.1:1)	105:55 (1.9:1)	144:103 (1.4:1)	331:178 (1.9:1)	P<0.001
Lauren histotype					
Intestinal	70 (69)	95 (59)	133 (54)	298 (58)	P=0.054
Diffuse	28 (27)	49 (31)	95 (38)	172 (34)	
Mixed	4 (4)	16 (10)	19 (8)	39 (8)	
Depth of invasion					
pT1	6 (6)	34 (21)	66 (27)	106 (21)	P<0.001
pT2	34 (33)	47 (29)	84 (34)	165 (32)	
pT3	49 (48)	61 (38)	89 (36)	199 (39)	
pT4	13 (13)	18 (11)	8 (3)	39 (8)	
Nodal status (TNM)					
pN0	20 (20)	56 (35)	102 (41)	178 (35)	P=0.003
pN1	34 (33)	49 (31)	59 (24)	142 (28)	
pN2	23 (22)	24 (15)	49 (20)	96 (19)	
pN3	25 (25)	31 (19)	37 (15)	93 (18)	
M1a (when D>2)	17 (30)	9 (12)	9 (9)	35 (16)	

Δυτική



Ανατολική



Πολλά χαμηλής αξίας δεδομένα

28	Prospective cohort study	191 patients undergoing potentially curative gastrectomy	D2 nodal dissection	Operative mortality, 5 year survival	QS = 3	Absent
26	Retrospective case series	148 patients undergoing potentially curative gastrectomy	D1 nodal dissection	Operative mortality, 5 year survival	Non-specialist practice in several centres: QS = 1	Absent
34	Retrospective case series	224 patients undergoing total gastrectomy for cancer of upper 1/3 of stomach	D2 nodal dissection	Postoperative mortality, 5 year survival.	Compared splenectomy and no splenectomy: QS = 0	Absent
42	Retrospective case series	239 patients undergoing potentially curative gastrectomy	D2 nodal dissection	Operative mortality, 5 year survival	Represents last of four time periods with different surgical policies: QS = 3	Absent
29	Retrospective case series	318 patients undergoing potentially curative gastrectomy	D2 nodal dissection	Operative mortality, 5 year survival	QS = 2	Absent
31	Prospective cohort study	375 patients undergoing potentially curative gastrectomy	D2 nodal dissection	Operative mortality, 5 year survival	Description of study as prospective seems doubtful: QS = 1	Absent
27	Retrospective case series	87 patients undergoing gastrectomy for cancer	D1 nodal dissection	Operative mortality, 5 year survival	Only 31 patients considered curative and used in survival analysis: QS = 2	Absent
30	Retrospective case series	166 patients undergoing potentially curative gastrectomy	D2 nodal dissection	Operative mortality, 5 year survival	QS = 1	Absent
10	Non-randomised comparison	250 patients undergoing potentially curative gastrectomy	D1 or D2 nodal dissection	Operative mortality, 5 year survival	Compared results of two teams in one hospital over same time period: QS = 1	Absent
32	Prospective cohort study	146 patients undergoing potentially curative gastrectomy	D2 nodal dissection	Operative mortality, 5 year survival	QS = 3	Absent
11	Prospective cohort study	1654 patients undergoing potentially curative gastrectomy	D1 or D2 nodal dissection	Operative mortality, 5 year survival	Definitions of D1 and D2 dissections used controversial: QS = 4	Absent
25	Prospective cohort study	1654 patients undergoing potentially curative gastrectomy	D1 or D2 nodal dissection	Operative mortality, 5 year survival	QS = 4	Absent

META ANALYSES

Meta-Analysis of D1 Versus D2 Gastrectomy for Gastric Adenocarcinoma

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Emma Osland, BHSc, M Phil,*¶ and Breda Memon, RGN, LLB, PGCEd**

TABLE 1. Salient Features of 6 RCTs

Authors		Dent et al ⁷	Robertson et al ⁸	Bonenkamp et al ⁹	Cuschieri et al ¹⁰	Deguli et al ¹¹	Wu et al ¹²
Year		1988	1994	1995	1999	2004	2006
Country		South Africa	Hong Kong	Netherlands	UK	Italy	Taiwan
Pts (M,F)	D1	M = 12, F = 10	M = 20, F = 5	M = 216, F = 164	M = 132, F = 68	M = 39, F = 37	M = 84, F = 26
	D2	M = 15, F = 6	M = 22, F = 7	M = 188, F = 143	M = 138, F = 62	M = 48, F = 38	M = 86, F = 25
Age (yr)	D1	45.1*	60	64.9	67	64	68
	D2	55.8*	58	63.1	67	61.4	67
Pathological Tumor	T0	D1 = 0, D2 = 0	D1 = 0, D2 = 0	D1 = 2, D2 = 3	D1 = 0, D2 = 0	D1 = 0, D2 = 0	D1 = 0, D2 = 0
	T1	D1 = 6, D2 = 7	D1 = 10, D2 = 9	D1 = 98, D2 = 85	D1 = 48, D2 = 40	D1 = 27, D2 = 27	D1 = 23, D2 = 20
Stage	T2	D1 = 5, D2 = 5	D1 = 7, D2 = 8	D1 = 181, D2 = 152	D1 = 63, D2 = 69	D1 = 23, D2 = 28	D1 = 26, D2 = 20
	T3	D1 = 11, D2 = 14	D1 = 8, D2 = 10	D1 = 94, D2 = 82	D1 = 84, D2 = 86	D1 = 26, D2 = 31	D1 = 56, D2 = 59
	T4	D1 = 0, D2 = 0	D1 = 0, D2 = 2	D1 = 3, D2 = 9	D1 = 0, D2 = 0	D1 = 0, D2 = 0	D1 = 5, D2 = 3
	Tx	D1 = 0, D2 = 0	D1 = 0, D2 = 0	D1 = 2, D2 = 0	D1 = 5, D2 = 5	D1 = 0, D2 = 0	D1 = 0, D2 = 0
Pancreatectomy	D1	0	0	10	8	1	1
	D2	0	29	98	113	3	13
Splenoectomy	D1	0	0	41	62	4	4
	D2	0	29	124	131	12	14
Type of Gastrectomy	Subtotal	D1 = 18, D2 = 19	D1 = 25, D2 = 0	D1 = 264, D2 = 203	NA	D1 = 57, D2 = 64	D1 = 80, D2 = 88
	Total	D1 = 4, D2 = 2	D1 = 0, D2 = 29	D1 = 115, D2 = 126	NA	D1 = 19, D2 = 22	D1 = 30, D2 = 23
Blood Transfusion	D1	4 (total units)	0 (median no of units)	113 (no of pts)	NA	NA	Less (exact no NA)
	D2	25 (total units)	2 (median no of units)	170 (no of pts)	NA	NA	More (exact no NA)
Primary outcome		Morbidity & mortality	Morbidity and mortality	Morbidity and mortality	Morbidity and mortality	Morbidity and mortality	Morbidity and mortality
Secondary outcome		None	Long-term survival	Long-term survival	Long-term survival	Long-term survival	Long-term survival
			No 5 or 10 year data available	10 and 15 yr data available	5 year data available	5 year data available	5 year data available

*Mean (rest are median).
F, female; M, male; n, number; NA, not available.

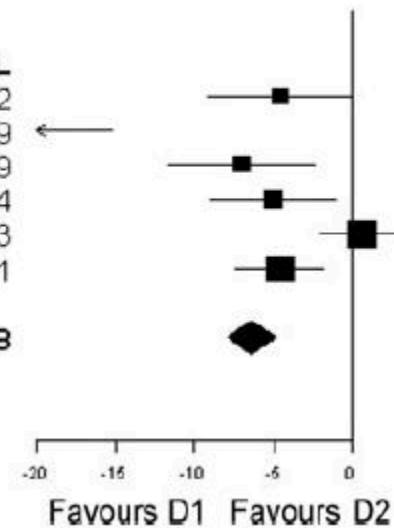
Length of hospital stay

Study	D1 mean(sd)	D2 mean(sd)	WMD	LL	UL
Dent et al	9.30(4.65)	13.9(9.7)	-4.6	-9.18	-0.02
Robertson et al	9.75(2.75)	34(22.5)	-24.25	-32.51	-15.99
Bonenkamp et al	18(25.67)	22(45.17)	-7	-11.6	-2.39
Cuschieri et al	18(16.83)	23(22.83)	-5	-8.85	-1.14
Degiuli et al	13.75(11.66)	13.15(3.17)	0.6	-2.1	3.3
Chew-Wun Wu et al	15(4)	19.6(13.9)	-4.6	-7.29	-1.91

Meta-analysis
Q = 36.34 df = 5
P = 0.0001

I² = 86.2%

-6.37 -10.66 -2.08



Post-operative complications

Study	D1 n/N	D2 n/N	OR	LL	UL
Dent et al	3/22	8/21	0.26	0.06	1.15
Robertson et al	0/25	24/29	0.004	2e-04	0.08
Bonenkamp et al	128/513	183/483	0.54	0.41	0.71
Cuschieri et al	55/200	92/200	0.44	0.29	0.68
Degiuli et al	8/76	14/86	0.6	0.24	1.53
Chew-Wun Wu et al	8/110	19/111	0.38	0.16	0.91

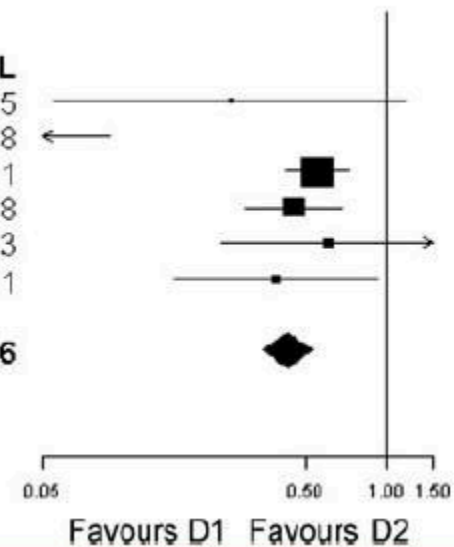
Meta-analysis

Q = 11.85 df=5

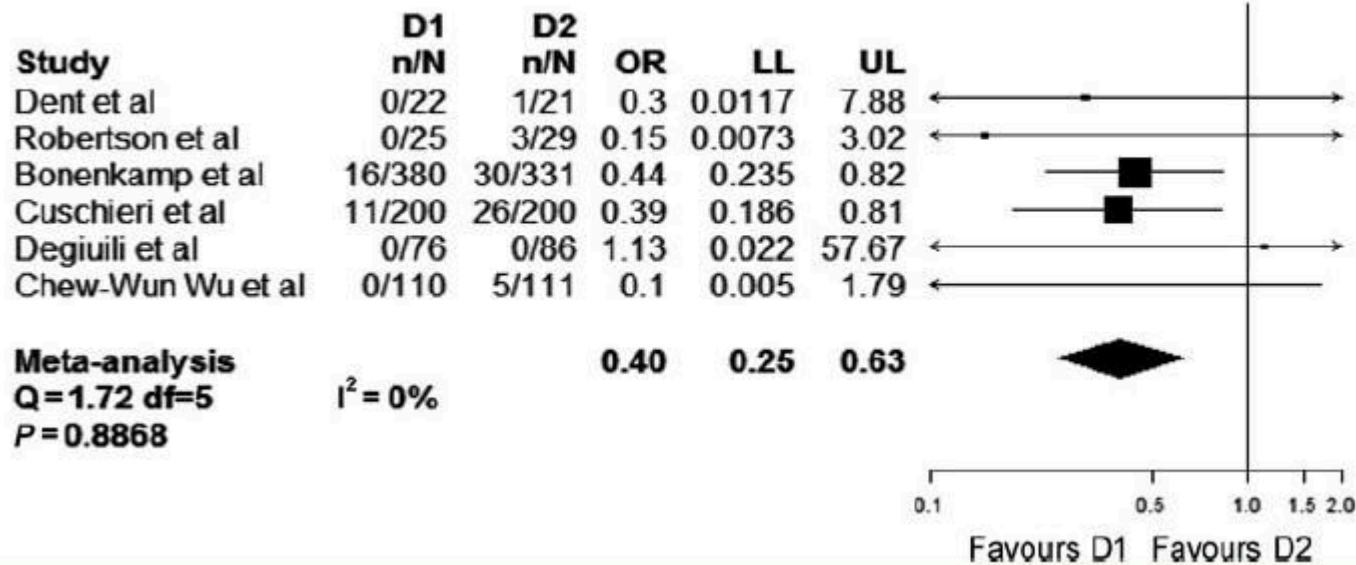
P = 0.0369

I² = 57.8%

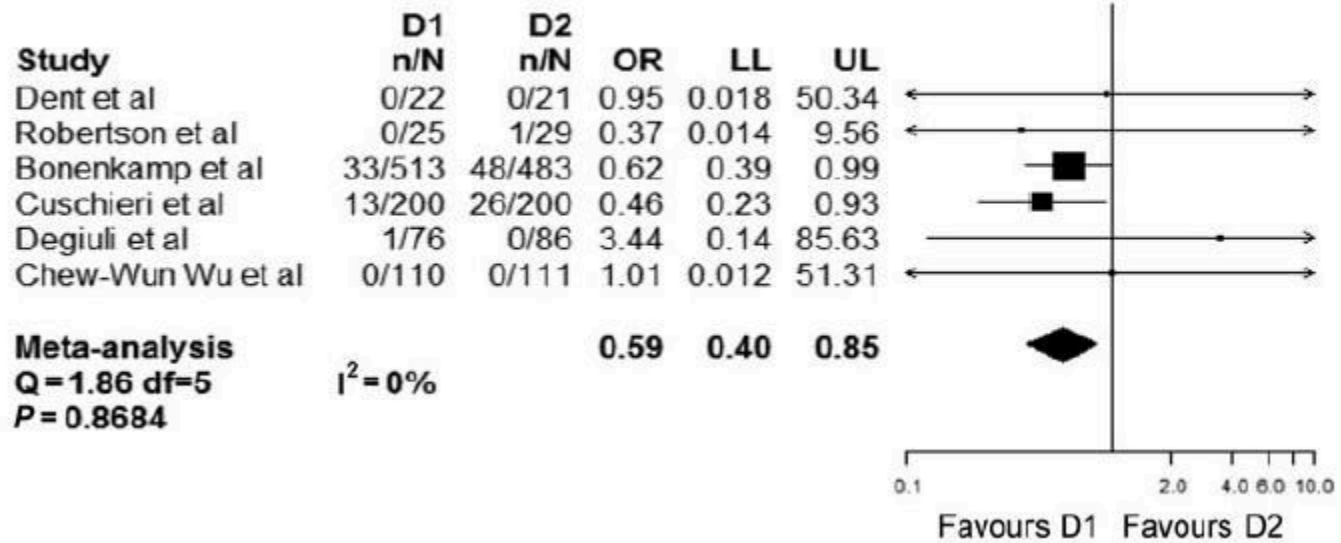
0.42 0.27 0.66



Anastomotic leak:

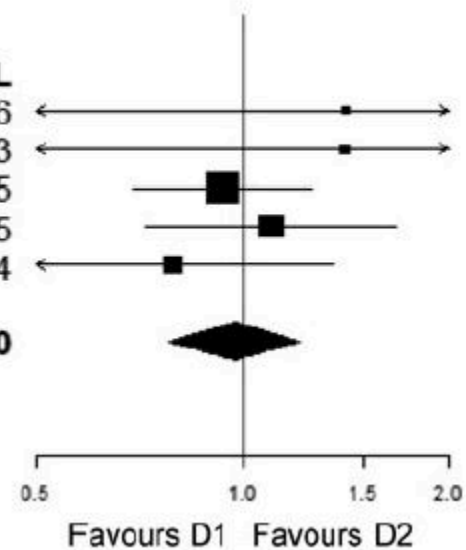


Mortality



5-year survival:

Study	D1 n/N	D2 n/N	OR	LL	UL
Dent et al	18/22	16/21	1.41	0.32	6.16
Robertson et al	15/25	15/29	1.4	0.47	4.13
Bonenkamp et al	171/380	155/331	0.93	0.69	1.25
Cuschieri et al	70/200	66/200	1.09	0.72	1.65
Chew-Wun Wu et al	59/110	66/111	0.79	0.46	1.34
Meta-analysis			0.97	0.78	1.20
Q = 1.67 df=4	I² = 0%				
P = 0.797					



Conclusions: On the basis of this meta-analysis we conclude that D1 gastrectomy is associated with significant fewer anastomotic leaks, postoperative complication rate, reoperation rate, decreased length of hospital stay and 30-day mortality rate. Finally, the 5-year survival in D1 gastrectomy patients was similar to the D2 cohort.

An evidence-based medicine review of lymphadenectomy extent for gastric cancer

Sun Hu Yang, M.D.^{a,b}, You Cheng Zhang, M.D., Ph.D.^{a,*}, Ke Hu Yang, M.S.^b,
You Ping Li, M.S.^{b,c}, Xiao Dong He, M.S.^a, Jin Hui Tian, M.S.^b, Ting Hong Lv, B.S.^b,
Ying Hua Hui, B.S.^b, Neel Sharma, B.S., M.B.Ch.B.^d

^aDepartment of General Surgery, Lanzhou University Second Hospital, No. 80 Cuiyingmen, Chengguan District, Lanzhou City 730030, Gansu, China; ^bEvidence Based Medicine Center of Lanzhou University, Lanzhou City, Gansu, China; ^cChinese Cochrane Center, Chengdu, Sichuan, China; ^dThe Royal London Hospital, Barts and the London NHS Trust, London E1 1BB, United Kingdom

CONCLUSIONS: The results suggest that D2 and D3 surgery may not offer specific advantages for gastric cancer and instead may lead to disadvantages for patient outcomes.

Περιορισμοί

- ▣ Εμπειρία με D2 εκτομές
- ▣ «Μόλυνση των στοιχείων»
- ▣ Ο ρόλος της σπληνεκτομής σε D2
- ▣ Ανάλυση υποομάδων
- ▣ Επίδραση νέο και επικουρικών θεραπειών

Εμπειρία με D2 εκτομές

- ▣ **Need at least 25 cases**

Parikh et al, Br J Surgery 1996;83:1595



Εμπειρία με D2 εκτομές

Randomized clinical trial

Morbidity and mortality in the Italian Gastric Cancer Study Group randomized clinical trial of D1 *versus* D2 resection for gastric cancer

M. Degiuli¹, M. Sasako³ and A. Ponti² on behalf of the Italian Gastric Cancer Study Group

¹University Division of General Surgery 1a, and ²Unit of Epidemiology, Centro Prevenzione Oncologica Piemonte, Hospital San Giovanni Battista, Turin, Italy, and ³Gastric Cancer Division, National Cancer Centre Hospital, Tokyo, Japan

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British Journal of Surgery 2010; 97: 643–649

Εμπειρία με D2 εκτομές

	D1 gastrectomy	D2 gastrectomy	<i>P</i> ‡	Total	<i>P</i> §
Non-surgical complications	10 of 133 (7.5)	16 of 134 (11.9)	0.223	26 of 267 (9.7)	
Surgical complications	9 of 133 (6.8)	10 of 134 (7.5)	0.825	19 of 267 (7.1)	
Total morbidity	16* of 133 (12.0)	24† of 133 (17.9)	0.178	40 of 267 (15.0)	
Total gastrectomy	6 of 35 (17)	6 of 31 (19)	0.186	12 of 66 (18)	0.401
Distal gastrectomy	10 of 98 (10)	18 of 103 (17.5)	0.137	28 of 201 (13.9)	
N0	8 of 63 (13)	12 of 57 (21)	0.220	20 of 120 (16.7)	0.563
N+	8 of 68 (12)	12 of 74 (16)	0.446	20 of 142 (14.1)	
< 70 years	10 of 88 (11)	15 of 99 (15)	0.447	25 of 187 (13.4)	0.259
≥ 70 years	6 of 45 (13)	9 of 35 (26)	0.159	15 of 80 (19)	
In-hospital mortality	4 of 133 (3.0)	3 of 134 (2.2)	0.722¶	7 of 267 (2.6)	
Total gastrectomy	3 of 35 (9)	2 of 31 (6)	1.000¶	5 of 66 (8)	0.011¶
Distal gastrectomy	1 of 98 (1)	1 of 103 (1.0)	1.000¶	2 of 201 (1.0)	
N0	1 of 63 (2)	1 of 57 (2)	1.000¶	2 of 120 (1.7)	0.459¶
N+	3 of 68 (4)	2 of 74 (3)	0.670¶	5 of 142 (3.5)	
< 70 years	2 of 88 (2)	2 of 99 (2)	1.000¶	4 of 187 (2.1)	0.431¶
≥ 70 years	2 of 45(4)	1 of 35 (3)	1.000¶	3 of 80 (4)	

Εμπειρία με D2 εκτομές

Randomized clinical trial

Morbidity and mortality in the Italian Gastric Cancer Study Group randomized clinical trial of D1 *versus* D2 resection for gastric cancer

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Correspondence to: Dr M. Degiuli, Ospedale San Giovanni Battista di Torino, 1a Divisione Universitaria di Chirurgia Generale, Corso Bramante 88/90, 10126 Torino, Italy (e-mail: mdegiuli@hotmail.com)

Conclusion: In specialized centres the rate of complications following D2 dissection is much lower than in published randomized Western trials. D2 dissection, in an appropriate setting, can therefore be considered a safe option for the radical management of gastric cancer in Western patients. Registration number: ISRCTN11154654 (<http://www.controlled-trials.com>).

British Journal of Surgery 2010; 97: 643–649

«Μόλυνση των στοιχείων»

- ▣ Contamination: mix of patients between groups from 22,8 to 36,6 %
- ▣ Proportion of patients treated with curative intent 66%

Bonenkamp et al, Gastric Cancer 1998;1:152

Ο ρόλος της σπληνεκτομής σε D2

A prospective randomized study comparing D2 total gastrectomy versus D2 total gastrectomy plus splenectomy in 187 patients with gastric carcinoma

Attila Csendes, MD, Patricio Burdiles, MD, Jorge Rojas, MD, Italo Braghetto, MD, Juan Carlos Diaz, MD, and Fernando Maluenda, MD, *Santiago, Chile*

Results. *Operative mortality was similar after both operations (3% after TG and 4% after TGS). Septic complications after surgery were higher after TGS compared with TG (P < .04). Five-year survival rates were not statistically different between groups or in subset analysis according to stage of disease.*

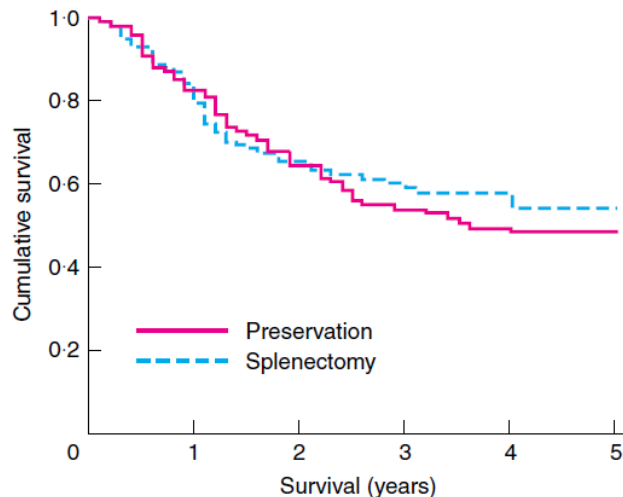
Ο ρόλος της σπληνεκτομής σε D2

Randomized clinical trial

Randomized clinical trial of splenectomy *versus* splenic preservation in patients with proximal gastric cancer

W. Yu, G. S. Choi and H. Y. Chung

Department of Surgery, Kyungpook National University, Taegu, 700-721, Korea



No. at risk	0	1	2	3	4	5
Preservation	103	85	67	52	44	39
Splenectomy	104	84	63	55	49	40

Ανάλυση υποομάδων

Review

Gastrectomy with extended lymphadenectomy for primary treatment of gastric cancer

P. McCulloch¹, M. Eidi Niita², H. Kazi³ and J. J. Gama-Rodrigues²

¹Academic Unit of Surgery, University Hospital Aintree, University of Liverpool, Liverpool, UK, ²Gastric Surgery Group and The Department of Digestive Surgery, Hospital das Clinicas, University of Sao Paulo School of Medicine, and ³Academic Unit of Surgery, University of Liverpool, Liverpool, UK

Correspondence to: Mr P. McCulloch, Clinical Science Centre, University Hospital Aintree, Lower Lane, Liverpool L9 7AL, UK
(e-mail: petermcculloch@doctors.org.uk)

Ανάλυση υποομάδων

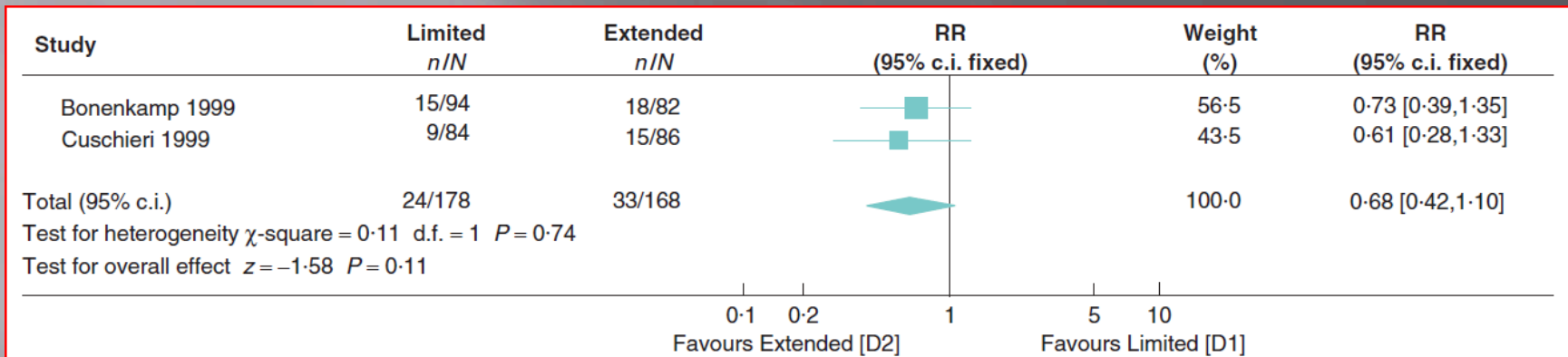


Fig. 2 Meta-analysis of 5 year survival for serosa positive (T3+) patients in randomized trials of D1 *versus* D2 lymphadenectomy

Ανάλυση υποομάδων

Surgical treatment of gastric cancer: 15-year follow-up results of the randomised nationwide Dutch D1D2 trial

Ilfet Songun, Hein Putter, Elma Meershoek-Klein Kranenbarg, Mitsuru Sasako, Cornelis J H van de Velde

	D1 group		D2 group		HR (95% CI)	Log-rank p value	Interaction p value
	N	15-year overall survival (95% CI)	N	15-year survival overall (95% CI)			
Total	380	21% (17-26)	331	29% (24-34)	0.92 (0.78-1.09)	0.34	..
Sex							
Male	215	21% (15-27)	186	24% (18-30)	1.08 (0.86-1.35)	0.50	0.04
Female	165	21% (15-28)	145	35% (27-43)	0.75 (0.58-0.98)	0.03	
Age, years							
≤70	252	30% (25-36)	229	36% (30-42)	0.93 (0.75-1.16)	0.54	0.89
>70	128	3% (0-6)	102	13% (6-20)	0.88 (0.67-1.16)	0.36	
Pathological stage*							
T1	98	39% (29-49)	85	53% (42-63)	0.79 (0.53-1.18)	0.25	0.79
T2	181	21% (14-27)	152	25% (18-32)	0.95 (0.75-1.22)	0.70	
T3	94	5% (1-10)	82	15% (7-22)	0.94 (0.68-1.28)	0.68	
Lymph nodes							
Negative	171	35% (27-42)	144	39% (31-47)	0.98 (0.74-1.30)	0.88	0.33
Positive	209	10% (6-14)	187	22% (16-27)	0.87 (0.70-1.08)	0.20	
N stage							
N0	171	35% (27-42)	144	39% (31-47)	0.98 (0.74-1.30)	0.88	0.15
N1	138	15% (9-21)	113	28% (19-36)	0.87 (0.66-1.15)	0.33	
N2	50	0% (0)	47	19% (8-30)	0.68 (0.44-1.04)	0.07	
N3	21	0% (0)	27	0% (0)	0.73 (0.40-1.25)	0.28	

Ανάλυση υποομάδων

Conclusions: Evidence for D2 dissection is inconclusive. No overall survival advantage has emerged, but some patients with intermediate stage disease may benefit. Excess operative mortality appears to be associated with pancreatico-splenectomy, low case volume and lack of specialist training.

Επίδραση νέο και επικουρικών θεραπειών

Table 1 Characteristics of included studies

Study	Country	Patients (n)	Intervention	Design	Randomization procedure	Allocation concealment	Blinding	Groups comparable	Chemotherapy or radiotherapy	intention to treat
Bonenkamp JJ, 1995 ¹⁵	Dutch	711 (380/331)	D1 vs D2	RCT	Adequate	Adequate	Not stated	Not stated	Not stated	Not stated
Bonenkamp JJ, 1999 ²⁰	Dutch	711 (380/331)	D1 vs D2	RCT	Adequate	Adequate	Not stated	Not stated	Not stated	Not stated
Cuschieri A, 1996 ¹⁶	UK	400 (200/200)	D1 vs D2	RCT	Adequate	Adequate	Not stated	Not stated	Not stated	Not stated
Cuschieri A, 1999 ²¹	UK	400 (200/200)	D1 vs D2	RCT	Adequate	Adequate	Not stated	Not stated	Not stated	Not stated
Degiuli M, 2004 ²²	Italy	162 (76/86)	D1 vs D2	RCT	Not stated	Unclear	Not stated	Not stated	Not stated	Not stated
Liu J, 2001 ²³	China	60 (30/30)	D1 vs D2	RCT	Adequate	Unclear	Not stated	Not stated	Not stated	Not stated
Bunt AMG, 1995 ²⁴	Netherlands	473 (253/220)	D1 vs D2	RCT	Not stated	Unclear	Not stated	Not stated	Not stated	Not stated
Dent DM, 1988 ²⁵	South Africa	43 (22/21)	R1† vs R2*	RCT	Adequate	Adequate	Not stated	Yes	Not stated	Yes
Bonenkamp JJ, 1992 ²⁶	Netherlands	131 (64/67)	R1† vs R2*	RCT	Not stated	Unclear	Not stated	Not stated	Not stated	Not stated
Wu CW, 2006 ²⁷	Taiwan	221 (110/111)	D1 vs D3*	RCT	Adequate	Unclear	Not stated	Not stated	Yes	Not stated
Wu CW, 2004 ²⁸	Taiwan	221 (110/111)	D1 vs D3*	RCT	Adequate	Unclear	Not stated	Not stated	Yes	Not stated
Robertson CS, 1994 ²⁹	Hong Kong	54 (25/29)	R1† vs R3*	RCT	Adequate	Adequate	Not stated	Yes	Not stated	Not stated
Kodera Y, 2005 ³⁰	Japan	523 (263/260)	D2 vs D3	RCT	Adequate	Adequate	Not stated	Not stated	Not stated	Not stated
Sano T, 2004 ³¹	Japan	523 (263/260)	D2 vs D2+‡	RCT	Adequate	Adequate	Not stated	Yes	Not stated	Not stated
Maeta M, 1999 ³²	Japan	70 (35/35)	D3* vs D4‡	RCT	Not stated	Unclear	Not stated	Yes	Not stated	Not stated
Kulig J, 2007 ³³	Poland	275 (141/134)	D2 vs D2+‡	RCT	Adequate	Unclear	Not stated	Yes	Yes	Not stated
Yonemura Y, 2006 ³⁴	Japan	256 (128/128)	D2 vs D4‡	RCT	Not stated	Unclear	Not stated	Yes	Not stated	Not stated
Jiang B, 2000 ³⁵	China	53 (32/21)	D2 vs D4‡	RCT	Not stated	Unclear	Not stated	Not stated	Not stated	Not stated

*Japanese classification of gastric carcinoma, 2nd English edition D2.

†Japanese classification of gastric carcinoma, 2nd English edition D1.


‡Japanese classification of gastric carcinoma, 2nd English edition D3.^{9,10}

Επίδραση νέο και επικουρικών θεραπειών

CHEMORADIOTHERAPY AFTER SURGERY COMPARED WITH SURGERY ALONE FOR ADENOCARCINOMA OF THE STOMACH OR GASTROESOPHAGEAL JUNCTION

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of the extent of lymphadenectomy. Only 10 percent of the patients underwent a D2 dissection, 36 percent had a D1 dissection, and 54 percent had a D0 lymphadenectomy (a resection in which not all of the N1 nodes were removed).



Επίδραση νέο και επικουρικών θεραπειών

- ▣ Μπορούν οι επικουρικές θεραπείες να υποκαταστήσουν το λιγότερο χειρουργείο ?

Optimal Management of Gastric Cancer

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primary cancer. Similarly, the expert panel felt that a D2 LN dissection is preferred for curative intent resection in advanced, nonmetastatic GC, whereas in patients with early GC, or significant comorbidities, a D1 LN dissection is appropriate. The necessity of these statements was deemed indeterminate because of the wide variety of clinical situations that surgeons may encounter.

PRINCIPLES OF SURGERY

N Staging

- Determine extent of disease by CT scan (chest, abdomen, and pelvic) ± EUS (if no metastatic disease seen on CT)
- In patients being considered for surgical resection without pre-operative therapy, laparoscopy¹ may be useful in detecting radiographically occult metastatic disease in patients with T3 and/or N+ disease seen on preoperative imaging. If laparoscopy is performed as a separate procedure, peritoneal washings should be performed as well.
- In patients receiving pre-operative therapy, a baseline laparoscopy along with peritoneal washings should be considered.
- Positive peritoneal cytology (performed in the absence of visible peritoneal implants) is associated with poor prognosis and is

Resectable tumors---continued

- Gastric resection should include the regional lymphatics-- perigastric lymph nodes (D1) and those along the named vessels of the celiac axis (D2), with a goal of examining at least 15 or greater lymph nodes^{6,7,8}
- ▶ Definition of D1 and D2 lymph node dissections
 - ◊ D1 dissection entails gastrectomy and the resection of both the greater and lesser omenta (which would include the lymph nodes along right and left cardiac, along lesser and greater curvature, suprapyloric along the right gastric artery, and infrapyloric area);
 - ◊ D2 dissection is a D1 plus all the nodes along the left gastric artery, common hepatic artery, celiac artery, splenic hilum and splenic artery.

Συμπέρασμα

- ▣ Τα υπάρχοντα στοιχεία δεν μπορούν να στηρίξουν την ευρεία εφαρμογή της D2 εκτομής όμως υπάρχουν σοβαροί μεθοδολογικοί περιορισμοί

Συμπέρασμα

- ▣ D2 εκτομές πρέπει να πραγματοποιούνται σε κεντρα με εμπειρία ώστε η νοσηρότητα και η θνητότητα να διατηρούνται στο ελάχιστο δυνατό
- ▣ Η σπληνεκτομή δεν φαίνεται να έχει θέση
- ▣ Το μέγιστο όφελος αφορά υποομάδα ασθενών

▣ Είναι αναγκαία μια τυχαιοποιημένη μελέτη η οποία θα:

1. Εφαρμόζει την D2 με ελάχιστη νοσηρότητα και θνητότητα
2. Αποφεύγει την σπληνεκτομή
3. Εφαρμόζει την D2 σε επιλεγμένους ασθενείς (T3+, N1,N2)
4. Σταντάρει την χρήση νέο και επικουρικών θεραπειών



