

## **Contents of Lancet website material for EBCTCG local therapy comparisons**

**(also available, with powerpoints of selected graphs, on [www.ctsu.ox.ac.uk/projects/ebctcg](http://www.ctsu.ox.ac.uk/projects/ebctcg))**

Early Breast Cancer Trialists' Collaborative Group (EBCTCG). Effects of radiotherapy and of differences in the extent of surgery for early breast cancer on local recurrence and 15-year survival: an overview of the randomised trials. Lancet 2005; 366: 2087-2106.

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**Webtable 1: Randomised trials comparing radiotherapy versus the same management without radiotherapy — treatment details**

Type of surgery, year code and study name	Breast/chest wall (BW) irradiation	Axilla and supraclavicular fossa (AF) irradiation	Internal mammary chain (IMC) irradiation	Boost irradiation to scar (S)	Common systemic chemoendocrine therapy
<b>Breast-conserving surgery (BCS), generally with axillary clearance</b>					
76B NSABP B-06	50 Gy (2 Gy/f) c or m	None	None	None	pN+: FMeI
81L Uppsala-Örebro	54 Gy (2 Gy/f) c or m	None	None	None	None
82Y St George's	54 Gy md (2 Gy/f) m	0-50 Gy (2 Gy/f) m	None	None	ER+: tamoxifen; ER-: CMF
84P Ontario COG	40 Gy (2.5 Gy/f) c	None	None	12.5 Gy (2.5 Gy/f) c	None
85B Scottish	50 Gy (2-2.5 Gy/f) m	0-45 Gy (2.3 Gy/f) m	50 Gy (2-2.5 Gy/f) m	10-30 Gy (2-3 Gy/f) o,e or i	ER+: tamoxifen; ER-: CMF
85D West Midlands	40-50 Gy md (2-2.7 Gy/f) c	40-50 Gy (2-2.7 Gy/f) c	40-50 Gy md (2-2.7 Gy/f) c	15 Gy (3 Gy/f) e or c	Tamoxifen
86C CRC UK	Various	Various	Various	Various	None required
87R INT Milan 3	50 Gy (2 Gy/f) c or m	None	None	10 Gy (2 Gy/f) o or e	pN+: CMF or tamoxifen
89L NSABP B-21	50 Gy (2 Gy/f) c or m	None	None	10 Gy (2 Gy/f) o	Tamoxifen
91P Swedish BCCG	48-54 Gy (1.9-2.2 Gy/f) m	None	None	None	None required
<b>Mastectomy with axillary clearance</b>					
62B Berlin-Buch ABC	55 Gy (u Gy/f) c	55 Gy (u Gy/f) c	55 Gy (u Gy/f) c	None	None
64B Oslo X-ray	25-41 Gy (1.3-2.1 Gy/f) o	36 Gy (1.8 Gy/f) o	25-41 Gy (1.3-2.1 Gy/f) o	None	Ovarian irradiation
64E Oslo Co-60	None	50 Gy de (2.5 Gy/f) c	50 Gy de (2.5 Gy/f) c	None	Ovarian irradiation
69A Heidelberg XRT	None	65 Gy (2.2-2.7 Gy/f) c	65 Gy (2.2-2.7 Gy/f) c	None	None
71B Stockholm A	45 Gy (1.8 Gy/f) c or e	45 Gy de (1.8 Gy/f) c	45 Gy (1.8 Gy/f) c or e	None	None
71D SASIB	0-45 Gy (4.5 Gy/f) o or c	45-60 Gy (2-4.5 Gy/f) c	40-60 Gy (2-4 Gy/f) c or e	None	None
73C Mayo 70-56-32	0-50 Gy (2.1 Gy/f) m	50 Gy de (2.1 Gy/f) m	50 Gy de (2.1 Gy/f) m	None	CFP vs not
73E INT Milan 1	None	40-45 Gy (1.8-2 Gy/f) c or m	40-45 Gy (1.8-2 Gy/f) c or m	None	None
74D DFCI Boston	45 Gy (2.3 Gy/f) c or m	45 Gy (2.3 Gy/f) c or m	None	None	Either AC 6 vs AC 12 cycles, or CMF vs MF
74Q Piedmont OA	0-45 Gy (1.5 Gy/f) u	45 Gy (1.5-2.8 Gy/f) u	45 Gy (1.5-2.8 Gy/f) u	None	Mel vs CMF
76A SECSG 1	50 Gy (2 Gy/f) m	50 Gy (2 Gy/f) m	50 Gy (2 Gy/f) m	None	CMF
76C Glasgow	37.8 Gy (2.5 Gy/f) o	37.8 Gy (2.5 Gy/f) o	37.8 Gy (2.5 Gy/f) o	None	CMF
77J MD Ander. 7730B	45-50 Gy (1.8-1.9 Gy/f) c	45-50 Gy (1.8-1.9 Gy/f) c	45-50 Gy (1.8-1.9 Gy/f) c	12 Gy (u Gy/f) u	BCG+FAC vs FAC
78A S Swedish BCG	38 Gy (1.9 Gy/f) e,o,m or c	48-60 Gy (2.4 Gy/f) c or m	48 Gy (2.4 Gy/f) e, c or m	None	Premen: C; Postmen: tamoxifen
78B Toronto-Edmont.	None	40 Gy de (2.5 Gy/f) c	40 Gy de (2.5 Gy/f) c	None	CMF+ovarian irradiation+P±BCG
78G BCCA Vancouver	40 Gy (2.5 Gy/f) c or m	37.5 Gy de (2.3 Gy/f) c or m	37.5 Gy (2.3 Gy/f) c or m	None	CMF+ovarian irradiation+P vs CMF
78Q Düsseldorf U.	40 Gy (2 Gy/f) c	40 Gy (2 Gy/f) c	40 Gy (2 Gy/f) c	None	LMF
79F Coimbra	36 Gy (3 Gy/f) o or m	39-45 Gy (3.3-3.8 Gy/f) m	39 Gy (3.3 Gy/f) m	None	AC
79G Metaxas Athens	45-60 Gy (2 Gy/f) m	50 Gy (2 Gy/f) m	50 Gy (2 Gy/f) m	None	Various
80S Helsinki	45 Gy (3 Gy/f) c	45 Gy (3 Gy/f) c	30 Gy (3 Gy/f) c	None	CAFT
80W NSABC Israel	46-50 Gy (2 Gy/f) c or m	46-50 Gy (2 Gy/f) c or m	40 Gy (2 Gy/f) c or m	None	CMF
82B Danish BCG 82b pre	48-50 Gy (2-2.2 Gy/f) e	48-50 Gy (2-2.2 Gy/f) m	48-50 Gy (2-2.2 Gy/f) e	None	CMF
82C Danish BCG 82c post	48-50 Gy (2-2.2 Gy/f) e	48-50 Gy (2-2.2 Gy/f) m	48-50 Gy (2-2.2 Gy/f) e	None	Tamoxifen
82Q ECOG EST3181	46 Gy (2 Gy/f) c or m	46-50 Gy (2 Gy/f) c or m	46 Gy (2 Gy/f) c, m or e	None	CAF+H+tamoxifen
84A GBSG 03 Germany	50 Gy (2 Gy/f) m	50 Gy (2 Gy/f) m	44 Gy (1.8 Gy/f) m	None	CMF
<b>Mastectomy with axillary sampling</b>					
73A Wessex	46 Gy (2.3 Gy/f) c	55 Gy (2.5 Gy/f) c	46 Gy (2.3 Gy/f) c	None	None
74B Edinburgh I	45 Gy md (4.5 Gy/f) m	42.5 Gy md (4.3 Gy/f) m	None	None	None
85F Nottingham	45 Gy (3 Gy/f) u	45 Gy (3 Gy/f) u	None	None	Various
86C CRC UK	Various	Various	Various	Various	None required
<b>Mastectomy alone</b>					
61H NSABP B-03	None	35-45 Gy (1.8-2.3 Gy/f) o or c	35-45 Gy (1.8-2.3 Gy/f) o or c	None	None
70A Manchester RBS1	30-37 Gy (2-2.5 Gy/f) o	37-40 Gy (2.5-2.7 Gy/f) o or m	37-40 Gy (2.5-2.7 Gy/f) o or m	None	Ovarian ablation
70B Kings/Cambridge	28.5-46 Gy (1.5-3.2 Gy/f) o or s	28.5-46 Gy (1.5-3.2 Gy/f) o or s	28.5-46 Gy (1.5-3.2 Gy/f) o or s	None	None
71C NSABP B-04	50 Gy (2 Gy/f) s	45-50 Gy de (1.8-2.0 Gy/f) s	45 Gy de (1.8 Gy/f) s	None	None
78D Scottish D	37-45 Gy (2.3-3.7 Gy/f) o or m	38.4-45.9 Gy (2.3-3.8 Gy/f) o or m	40-45 Gy (2.3-2.7 Gy/f) o or m	None	Tamoxifen vs not
85Z Tokyo CIH PS	None	42-48 Gy (2-3 Gy/f) u	42-48 Gy (2-3 Gy/f) u	None	CMF
88U Tokyo CIH CZ	None	42-48 Gy (2-3 Gy/f) u	42-48 Gy (2-3 Gy/f) u	None	CMF

c=cobalt-60, e=electron, i=iridium-192, m=megavoltage (linear accelerator), o=orthovoltage, s=supervoltage, u=unknown, de=dose at depth (of nodes), f=fraction, Gy=Gray (intended dose), md=maximum tissue dose. A=doxorubicin (adriamycin), BCG=bacillus Calmette-Guérin, C=cyclophosphamide, ER=oestrogen receptor, F=fluorouracil, Ft=futrafur, H=halotestin, L=chlorambucil, M=methotrexate, Mel=melphalan, P=prednisone, (p)N+=(pathologically) node-positive, (p)N-=(pathologically) node-negative, vs=versus (at random), ±=randomising the addition of.

**Webtable 2: Randomised trials comparing more extensive surgery versus less extensive surgery — treatment details**

Comparison, year code and study name	Surgery 1 Active arm	Surgery 2 Control arm	Local recurrence definition	Notes (including common RT or systemic therapy)
<b>Internal mammary chain removal (both groups with mastectomy and axillary clearance)</b>				
63D Internat. Co-op	M+AC+Pec+IMNC	M+AC+Pec	Parasternal, axilla or supraclavicular	Data from Lima and Warsaw centres not available. Endocrine or chemotherapy to ~20%.
73D Chicago U.	M+AC+Pec+IMNC	M+AC+Pec	Within operative field (supraclavicular taken as distant)	
<b>Pectoral muscle removal (both groups with mastectomy and axillary clearance)</b>				
67C Grootte Schuur	M+AC+Pec	M+node picking	Scar, skin flap, axilla or supraclavicular	Node picking = local excision of enlarged nodes. Trial terminated after 3 years due to high rate of axillary recurrence.
69D Northwest UK	M+AC+Pec	M+AC	Skin flap, related chest wall or axilla	Unknown if adjuvant treatment given. RT to ~50%, CMF to ~90%, tamoxifen to ~70%.
76Q Berlin-Buch	M+AC+Pec	M+AC	Local tumour relapse	
91R CAMS China	M+AC+Pec	M+AC	Recurrences not generally collected	
<b>Axillary clearance in N+ve disease (both groups with mastectomy and radiotherapy)</b>				
58B Addenbrooke's	M+AC+Pec+(IMNC)	M+(AS)	Unspecified	Some axilla nodes removed in surgery 2, but no block dissection. RT (BW+AF+IMC). RT (BW).
72A WSSA Glasgow	M+AC	M	Scar, chest wall, supraclavicular or axilla (enlarged nodes)	
<b>Axillary clearance in N-ve disease (both groups with mastectomy and no axillary radiotherapy)</b>				
67B Cardiff N-	M+AC+(Pec)	M+AS	Chest wall, axilla, supraclavicular or IMN	Used only the 122 N- (as in the 78 N+ there was more RT in surgery 1).
67C Grootte Schuur	M+AC+Pec	M	Scar, flap, axilla or supraclavicular	
71C NSABP B-04	M+AC+Pec	M	Chest wall, scar, axilla, supra- and subclavicular or IMN	Axilla recurrences were excluded in some other reports. Some in surgery 2 (68/384) got AC after local recurrence. RT (BW) Some women randomised into other trials.
72A WSSA Glasgow	M+AC	M	Scar, chest wall, supraclavicular or axilla (enlarged nodes)	
*80Y Edinburgh N-	M+AC	M+AC1	Chest wall, axilla, or supraclavicular	
<b>Mastectomy versus breast-conserving surgery (both groups with axillary clearance and no radiotherapy)</b>				
76B NSAPB B-06	M+AC	BCS+AC1+2	Residual breast, chest wall, scar, axilla, supraclavicular or IMN	Residual breast recurrences were excluded in some other reports. Clear tissue margins required in surgery 2 (if not [64/719], M).
<b>Mastectomy versus breast-conserving surgery (both groups with axillary clearance and radiotherapy)</b>				
82A CRC, UK	M+AC1	BCS+AC1	Not specified	No information on tissue margin requirement available. RT (BW+AF+IMC) compulsory, except for last 20 pN- in surgery 1. Optional tamoxifen ± chemotherapy. Clear tissue margins required in surgery 2. RT (BW+AF+IMC) in surgery 1 and 2, but different technique. Premen: CMF, postmen: tamoxifen.
83J Danish BCG 82TM (high-risk group)	M+AC1+2	BCS+AC1+2	Residual breast, chest wall or axilla	

AC=axillary clearance (AC1, 2 or 3, shows levels cleared), AS=axillary sampling, BCS=breast-conserving surgery, IMN(C)=internal mammary node (clearance), M=mastectomy, Pec=pectoral muscle excision. Treatments in parentheses () were given to only some women; parentheses after RT denote irradiated sites. Other abbreviations defined in footnote to webtable 1.

\* Note added in proof: 80Y Edinburgh N- (8/123 vs 9/116 local recurrences) should have been in webfigure 9a, not 10a, and not in Table 4 or webfigure 7. Correction, however, would make no material difference.

**Webtable 3: Randomised trials comparing extensive surgery versus less extensive surgery plus radiotherapy — treatment details**

Comparison, year code and study name	Surgery 1 Active arm	Surgery 2 Control arm	Radiotherapy 2 Control arm	Local recurrence definition	Notes (including common RT or systemic therapy)
<b>Nodal surgery versus radiotherapy</b>					
†51A Copenhagen	M+AC+ Pec+IMNC	M	BW: 42-45 Gy md (2.3-2.5 Gy/f) o AF: 40 Gy (2.2 Gy/f) o	IMC: 28-30 Gy (1.6-1.7 Gy/f) o S: None	Parasternal, chest wall, axilla or supraclavicular
†64D SE Scotland	M+AC+Pec	M	BW: 45 Gy (4.5 Gy/f) m AF: 42.5 Gy md (4.3 Gy/f) m	IMC: 45 Gy (4.5 Gy/f) m S: None	Skin, axilla, supraclavicular or IMN
†70A Manchester RBS2	M+AC+(Pec)	M	BW: 30-37 Gy (2-2.5 Gy/f) o AF: 37-40 Gy (2-2.7 Gy/f) o or m	IMC: 37-40 Gy (2.5-2.7 Gy/f) o or m S: None	Axilla, supraclavicular or chest wall
71C NSABP B-04	M+AC+Pec	M	BW: 50 Gy (2 Gy/f) s AF: 45 Gy (1.8 Gy/f) s	IMC: 45 Gy (1.8 Gy/f) s S: None	Chest wall, scar, supra- and subclavicular, IMN or axilla
72A WSSA Glasgow	M+AC	M	BW: 42 Gy (2.1 Gy/f) o AF: 42 Gy (2.1 Gy/f) c or m	IMC: None S: None	Scar, chest wall, supraclavicular or axilla (enlarged nodes)
72H CMN Mexico	M+AC+Pec	M	BW: u AF: u	IMC: u S: u	Unknown
76Q Berlin-Buch	M+AC+ Pec+IMNC	M+AC+Pec	BW: None AF: u	IMC: u S: None	“Local relapse”
*80Y Edinburgh N+	M+AC	M+AC1	BW: u Gy (u Gy/f) m AF: 40-42.5 Gy (2-2.1 Gy/f) m	IMC: u Gy (u Gy/f) m S: None	Chest wall, axilla or supraclavicular
82K Ins.Curie Paris	BCS+AC	BCS	BW: 55 Gy (1.8 Gy/f) c AF: 50 Gy (1.7 Gy/f) c	IMC: 45 Gy (1.5 Gy/f) c S: 10-15 Gy (u Gy/f) c	Breast, axilla or supraclavicular
<b>Mastectomy with axillary clearance and radiotherapy versus breast-conserving surgery without axillary clearance plus more extensive radiotherapy</b>					
†61E Guy's London	M+AC+Pec	BCS	BW: 30-38 Gy (2.3-3 Gy/f) m AF: 30 Gy (3 Gy/f) o	IMC: 30-38 Gy (2.3-3 Gy/f) m S: None	Skin, axilla, breast, supraclavicular or IMN
<b>Mastectomy versus breast-conserving surgery plus radiotherapy, both with axillary clearance</b>					
72G IGR Villejuif	M+AC1+ (AC2+3)	BCS+AC1 +(AC2+3)	BW: 45 Gy (2.5 Gy/f) c AF: N-: none, N+: see note	IMC: N-: none, N+: see note S: 15 Gy (2.5 Gy/f) c or e	Breast, chest wall or lymph nodes
73E INT Milan 1	M+AC+Pec	BCS+AC	BW: 50 Gy (2 Gy/f) c or m AF: N-: none, N+: see note	IMC: N-: none, N+: see note S: 10 Gy (u Gy/f) o	Breast: recurrence or 2nd 1ry Regional: unknown
76B NSABP B-06	M+AC	BCS+ AC1+2	BW: 50 Gy (2 Gy/f) u AF: None	IMC: None S: None	Scar, breast, chest wall, axilla, supraclavicular or IMN
79J NCI Bethesda	M+AC	BCS+AC	BW: 48.6 Gy (1.8 Gy/f) m AF: 0-45 Gy de (1.8 Gy/f) m	IMC: 0-48.6 Gy (1.8 Gy/f) m S: 15-20 Gy (u Gy/f) e or i	Breast, chest wall, axilla, supraclavicular or IMN
80G EORTC 10801	M+AC+(Pec)	BCS+AC	BW: 50 Gy (2 Gy/f) u AF: 50 Gy (2 Gy/f) u	IMC: 50 Gy de (2 Gy/f) u S: 25 Gy (u Gy/f) e or i	No information available
83J Danish BCG 82TM (low-risk group)	M+AC	BCS+AC	BW: 48-50 Gy (2-2.2 Gy/f) m or e AF: None	IMC: None S: 10-25 Gy (2 Gy/f) e	Breast, chest wall or axilla
84A GBSG 01 Germany	BCS+AC1+2 and then M	BCS+ AC1+2	BW: 50 Gy (2 Gy/f) c or m AF: 50 Gy de (2 Gy/f) c or m	IMC: 50 Gy de (2 Gy/f) m or e S: 10-12 Gy (2-3 Gy/f) e	“Local”, axilla or supraclavicular

BW=breast or chest wall, M= mastectomy. Other abbreviations (and asterisked footnote) as in webtables 1 and 2.

† The local recurrence rate after RT was relatively high with the RT regimens actually given in the four oldest of these trials (51A, 61E, 64D, 70A), particularly in the earliest two of these (which started in 1951 and 1961).

**Webtable 4: Proportional breast cancer mortality reductions in years 0-4 and 5+, by absolute reduction in 5-year local recurrence risk (with the 24 types of local treatment comparison categorised into those producing <10%, 10-20%, or >20% reduction)**

Logrank statistics are given for any death, for mortality from causes other than breast cancer and, by subtraction, for breast cancer mortality

Category of absolute reduction in 5-year isolated local recurrence risk	Any death				Mortality from causes other than breast cancer*						Breast cancer mortality		
	Deaths/overall woman-years		Statistics		Ratio, active/control (SE)	Deaths/years without recurrence		Statistics		Ratio, active/control (SE)	Statistics**		Ratio, active/control (SE)
	Active	Control	O-E	V		Active	Control	O-E	V		O-E	V	
<b>(a) Mortality in years 0-4 after randomisation</b>													
<10%	1680/ 36 574	1726/ 36 839	-21.2	774.5	0.97 (0.04)	165/ 30 618	158/ 30 862	2.8	78.7	1.04 (0.11)	-23.9	695.8	0.97 (0.04)
10-20%	2354/ 43 580	2482/ 43 699	-50.6	1070.0	0.95 (0.03)	244/ 35 444	201/ 32 063	16.9	101.9	1.18 (0.11)	-67.6	968.2	0.93 (0.03)
>20%	677/ 10 667	729/ 10 856	-21.7	296.0	0.93 (0.06)	64/ 8736	650/ 7251	-3.7	26.9	0.87 (0.18)	-18.0	269.1	0.93 (0.06)
<b>Subtotal (a)</b>	<b>4711/ 90 816</b>	<b>4937/ 91 385</b>	<b>-93.5</b>	<b>2140.5</b>	<b>0.96 (0.02)</b>	<b>473/ 74 793</b>	<b>424/ 70 172</b>	<b>16.0</b>	<b>207.5</b>	<b>1.08 (0.07)</b>	<b>-109.5</b>	<b>1933.1</b>	<b>0.94 (0.02)</b>
<b>(b) Mortality in years 5+ after randomisation</b>													
<10%	2301/ 50 812	2305/ 51 305	-3.2	1043.3	1.00 (0.03)	749/ 41 975	708/ 41 488	10.4	330.5	1.03 (0.06)	-13.6	712.8	0.98 (0.04)
10-20%	2779/ 59 993	2849/ 56 977	-84.7	1212.4	0.93 (0.03)	885/ 49 440	692/ 41 416	54.4	327.5	1.18 (0.06)	-139.1	884.9	0.85 (0.03)
>20%	795/ 16 509	854/ 15 458	-43.8	357.6	0.88 (0.05)	232/ 13 373	174/ 9687	6.5	84.8	1.08 (0.11)	-50.3	272.8	0.83 (0.06)
<b>Subtotal (b)</b>	<b>5875/ 127 310</b>	<b>6008/ 123 732</b>	<b>-131.7</b>	<b>2613.3</b>	<b>0.95 (0.02)</b>	<b>1866/ 104 787</b>	<b>1574/ 92 587</b>	<b>71.3</b>	<b>742.8</b>	<b>1.10 (0.04)</b>	<b>-203.0</b>	<b>1870.5</b>	<b>0.90 (0.02)</b>
<b>Total (a+b)</b>	<b>10 586/ 218 446</b>	<b>10 945/ 215 451</b>	<b>-225.2</b>	<b>4753.8</b>	<b>0.95 (0.01)</b>	<b>2339/ 179 852</b>	<b>1998/ 163 029</b>	<b>87.3</b>	<b>950.3</b>	<b>1.10 (0.03)</b>	<b>-312.5</b>	<b>3803.6</b>	<b>0.92 (0.02)</b>
					<b>Active better: 2p=0.001</b>					<b>Active worse: 2p=0.005</b>	<b>Active better: 2p&lt;0.00001</b>		

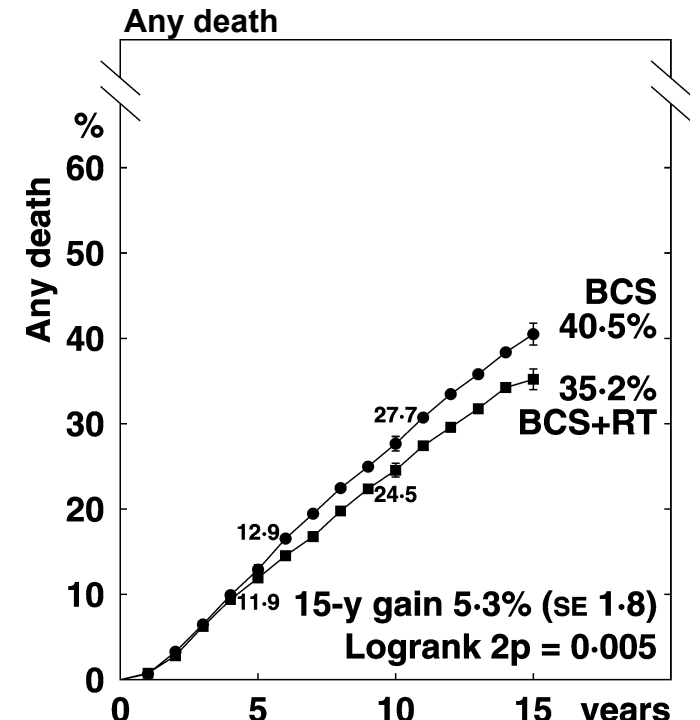
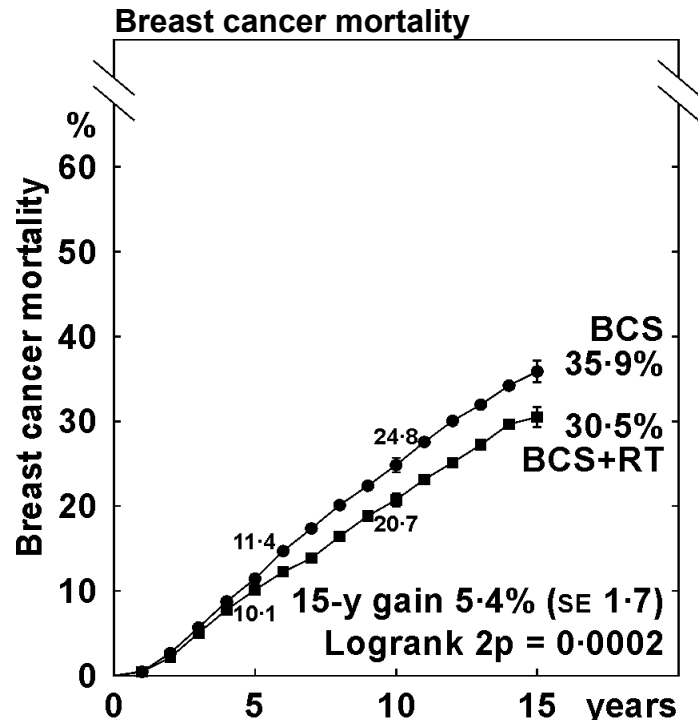
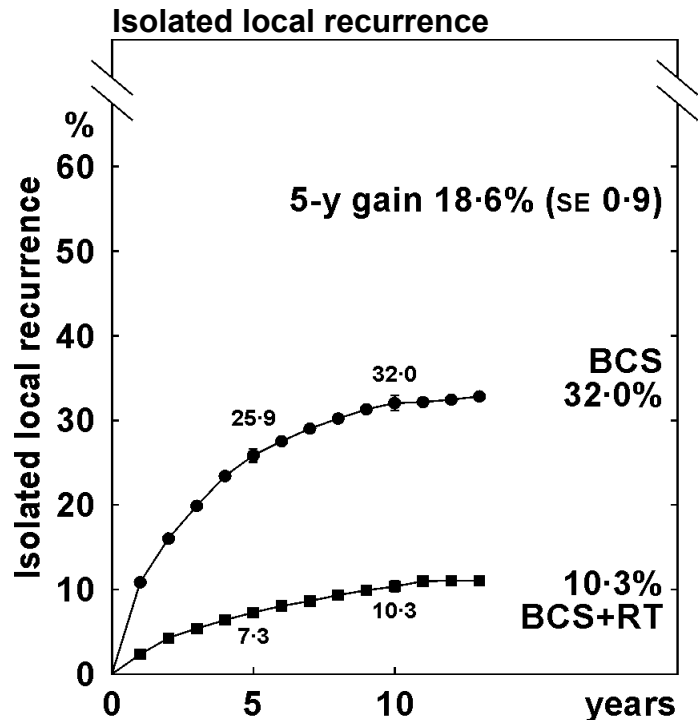
O-E is the logrank Observed minus Expected, V is its variance, and the estimated ratio, active versus control, of the annual mortality rates is  $\exp([O-E]/V)$ .

\* Defined as mortality from all causes before breast cancer recurrence.

\*\* Statistics for breast cancer mortality are calculated by "logrank subtraction," ie, subtraction of the statistics for mortality from causes other than breast cancer (O-E and V in the table above) from the corresponding statistics for any death.

Note added in proof: A paper on possible ways of improving logrank subtraction is being prepared by NSABP statistician John Bryant (bryant@nsabp.pitt.edu).

**Webfigure 1a: Radiotherapy after breast-conserving surgery, generally with axillary clearance (BCS±RT) in all women — 15-year outcome, where follow-up is sufficient** (life-table curves: 7311 women, 17% with node-positive disease)



Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Year 10+
BCS+RT	1.82 (282 / 15529)	0.78 (73 / 9338)	0.23 (8 / 3541)
BCS	6.29 (858 / 13631)	1.89 (137 / 7242)	0.20 (5 / 2554)
Rate ratio, from (O-E) / V	0.29 SE 0.04 -314.7 / 255.2	0.40 SE 0.09 -44.7 / 49.1	1.14 SE 0.61 0.4 / 3.1

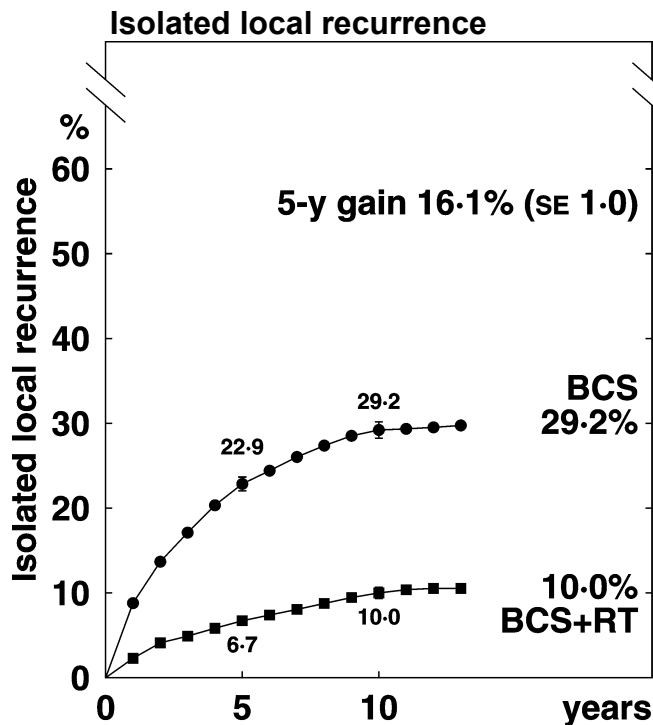
Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
BCS+RT	2.09 (352 / 16856)	2.47 (273 / 11071)	2.74 (99 / 3618)	2.88 (29 / 1007)
BCS	2.38 (396 / 16644)	3.36 (356 / 10591)	3.34 (113 / 3381)	2.50 (24 / 961)
Rate ratio, from (O-E) / V	0.88 SE 0.07 -23.1 / 174.1	0.75 SE 0.07 -42.6 / 146.8	0.83 SE 0.13 -9.2 / 49.0	1.18 SE 0.30 2.1 / 12.8

Death rates (% / year) and logrank analyses

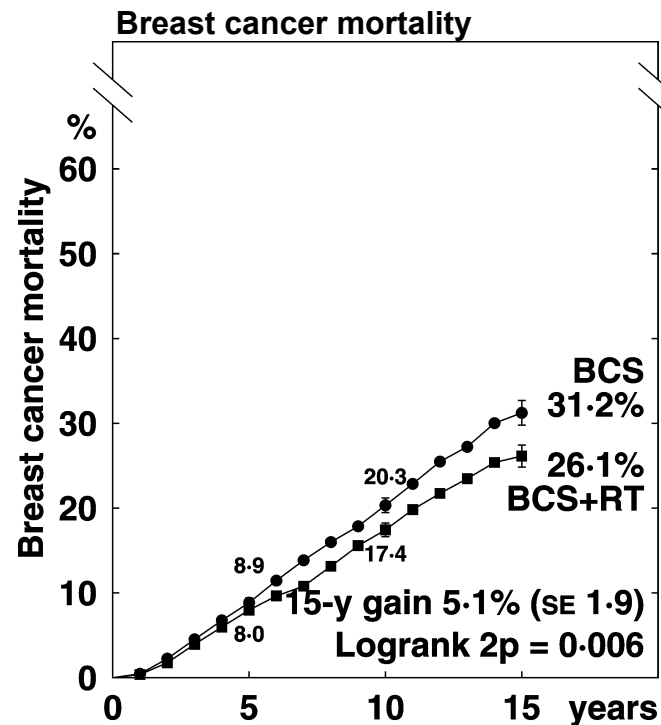
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
BCS+RT	2.51 (423 / 16856)	3.10 (343 / 11071)	3.32 (120 / 3618)	4.17 (42 / 1007)
BCS	2.70 (449 / 16644)	3.76 (396 / 10591)	3.93 (133 / 3381)	3.33 (32 / 961)
Rate ratio, from (O-E) / V	0.92 SE 0.07 -17.4 / 204.2	0.82 SE 0.07 -34.1 / 173.7	0.81 SE 0.12 -12.5 / 58.5	1.25 SE 0.27 3.9 / 17.6

Webfigure 1b: Radiotherapy after breast-conserving surgery, generally with axillary clearance (BCS±RT) in women with node-negative disease — 15-year outcome, where follow-up is sufficient (life-table curves: 6097 women)



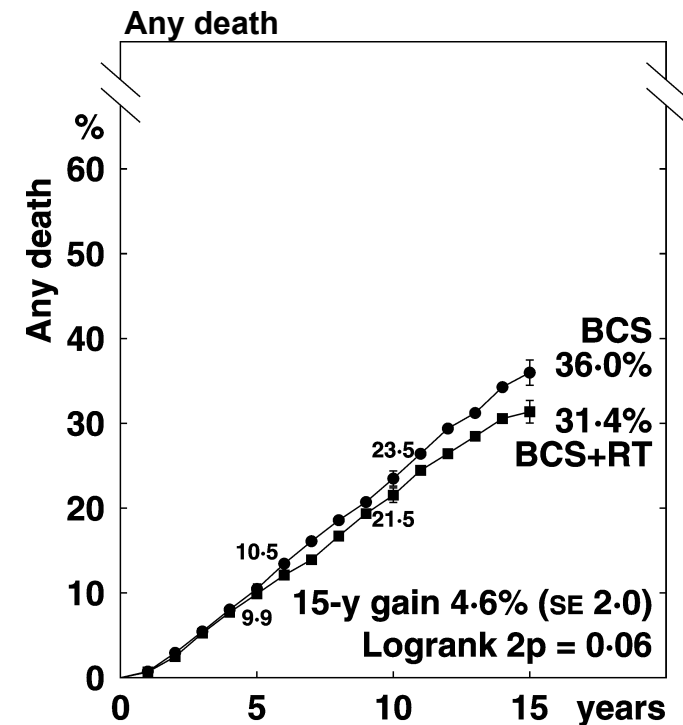
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Year 10+
BCS+RT	1.63 (216 / 13236)	0.81 (64 / 7944)	0.18 (5 / 2707)
BCS	5.41 (637 / 11774)	1.86 (116 / 6230)	0.15 (3 / 1990)
Rate ratio, from (O-E) / V	0.31 SE 0.04 -229.9 / 194.2	0.42 SE 0.10 -37.2 / 42.8	1.28 SE 0.81 0.5 / 2.0



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

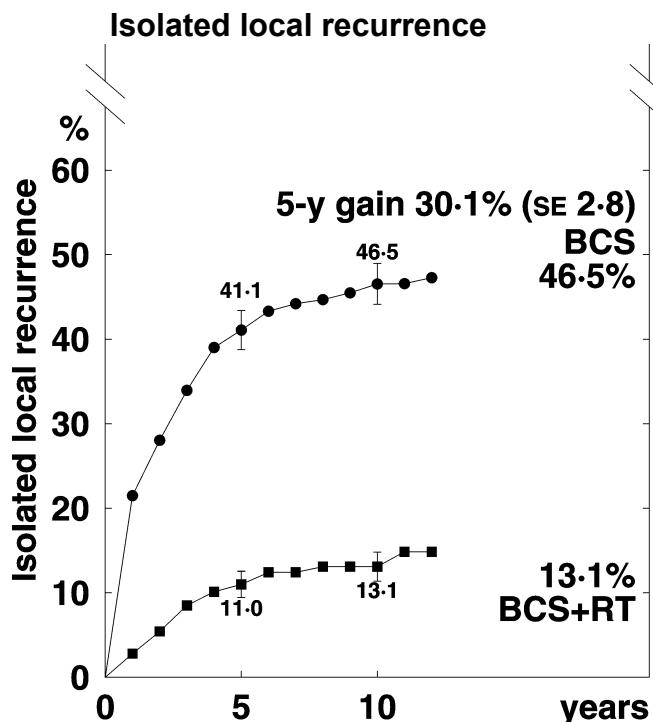
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
BCS+RT	1.62 (231 / 14254)	2.09 (194 / 9304)	2.41 (68 / 2826)	3.11 (22 / 707)
BCS	1.84 (257 / 13997)	2.72 (242 / 8906)	3.11 (82 / 2640)	2.44 (17 / 698)
Rate ratio, from (O-E) / V	0.89 SE 0.09 -13.1 / 116.7	0.78 SE 0.09 -26.1 / 103.5	0.79 SE 0.15 -8.3 / 35.3	1.28 SE 0.37 2.3 / 9.4



Death rates (% / year) and logrank analyses

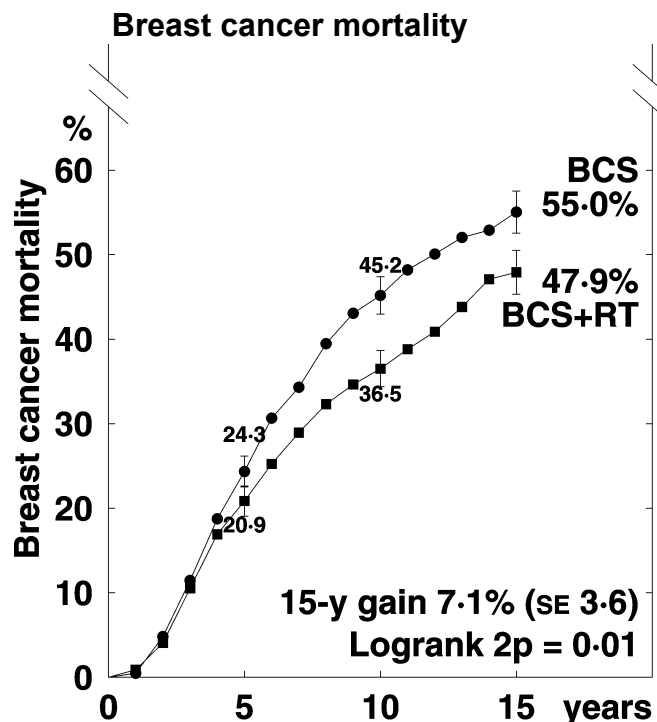
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
BCS+RT	2.06 (293 / 14254)	2.74 (255 / 9304)	3.01 (85 / 2826)	4.38 (31 / 707)
BCS	2.18 (305 / 13997)	3.12 (278 / 8906)	3.64 (96 / 2640)	3.58 (25 / 698)
Rate ratio, from (O-E) / V	0.94 SE 0.08 -8.9 / 143.5	0.86 SE 0.08 -18.6 / 126.9	0.80 SE 0.14 -9.4 / 42.6	1.22 SE 0.30 2.6 / 13.3

Webfigure 1c: Radiotherapy after breast-conserving surgery, generally with axillary clearance (BCS±RT) in women with node-positive disease — 15-year outcome, where follow-up is sufficient (life-table curves: 1214 women)



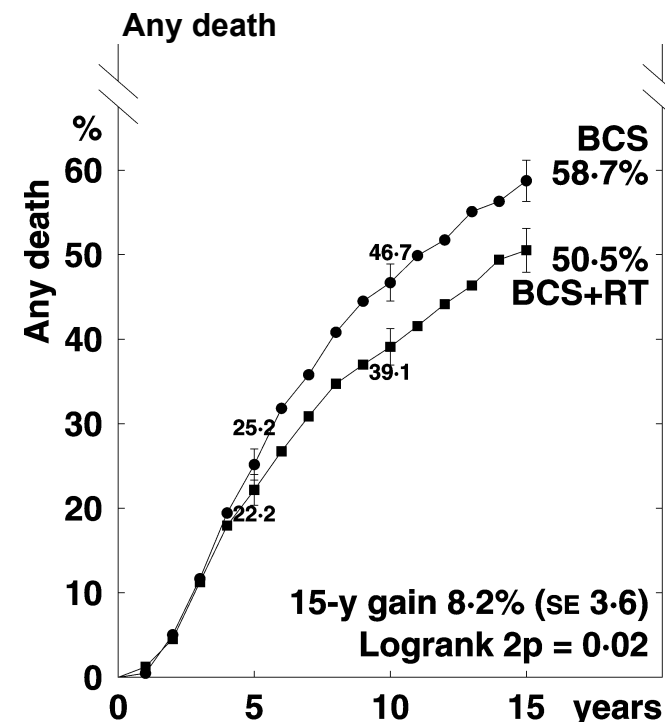
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Year 10+
BCS+RT	2.88 (66 / 2293)	0.65 (9 / 1394)	0.36 (3 / 834)
BCS	11.90 (221 / 1857)	2.08 (21 / 1012)	0.35 (2 / 564)
Rate ratio, from (O-E) / V	0.25 SE 0.07 -84.8 / 61.0	0.31 SE 0.23 -7.5 / 6.3	0.94 SE 0.91 -0.1 / 1.1



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
BCS+RT	4.65 (121 / 2602)	4.47 (79 / 1767)	3.91 (31 / 792)	2.33 (7 / 300)
BCS	5.25 (139 / 2647)	6.77 (114 / 1685)	4.18 (31 / 741)	2.66 (7 / 263)
Rate ratio, from (O-E) / V	0.84 SE 0.12 -10.0 / 57.4	0.68 SE 0.13 -16.5 / 43.3	0.93 SE 0.26 -0.9 / 13.6	0.94 SE 0.52 -0.2 / 3.4

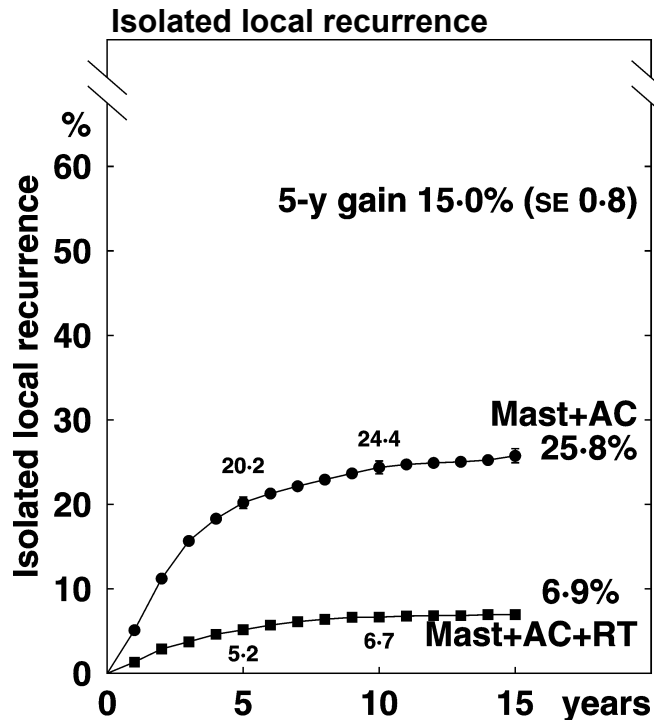


Death rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
BCS+RT	5.00 (130 / 2602)	4.98 (88 / 1767)	4.42 (35 / 792)	3.67 (11 / 300)
BCS	5.44 (144 / 2647)	7.12 (120 / 1685)	4.99 (37 / 741)	2.66 (7 / 263)
Rate ratio, from (O-E) / V	0.87 SE 0.12 -8.5 / 60.8	0.72 SE 0.12 -15.4 / 46.8	0.82 SE 0.23 -3.1 / 15.8	1.35 SE 0.56 1.3 / 4.3

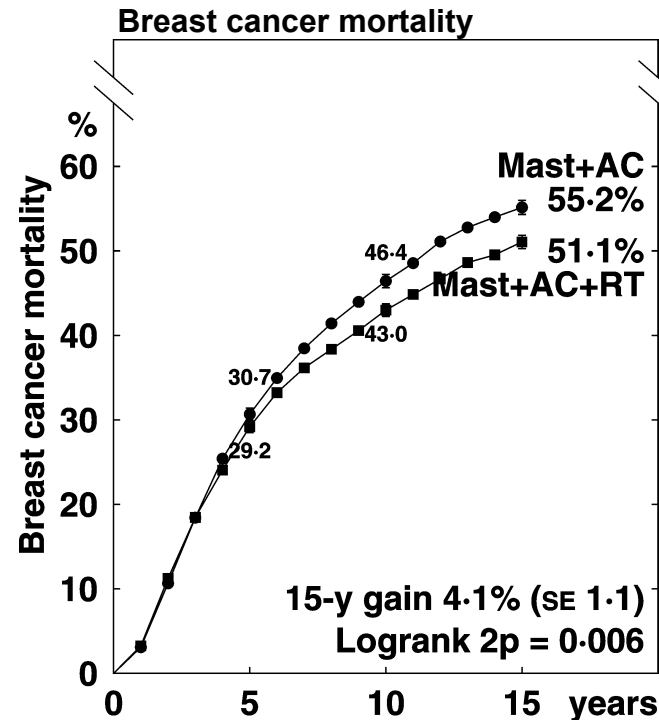


**Webfigure 2a: Radiotherapy after mastectomy with axillary clearance (Mast+AC±RT) in all women — 15-year outcome**  
 (life-table curves: 9933 women, 86% with node-positive disease)



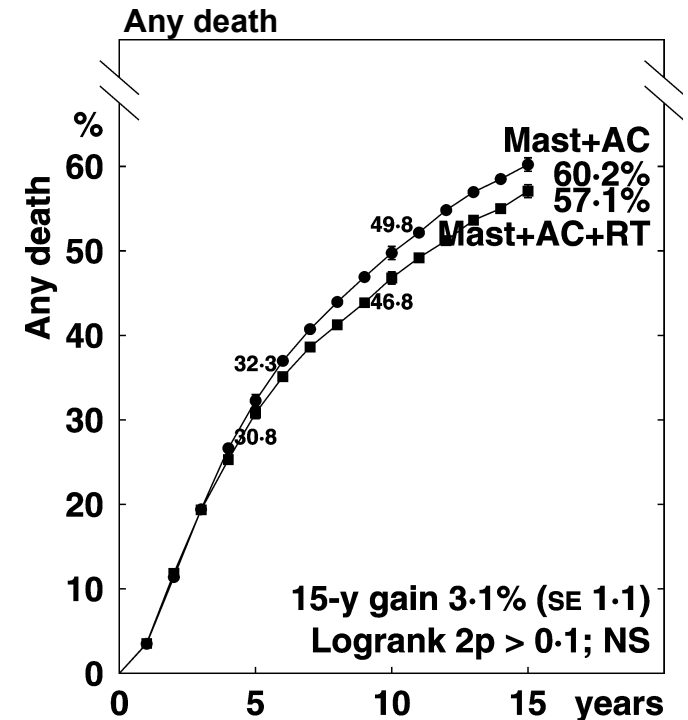
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	1.24 (227 / 18342)	0.38 (46 / 11976)	0.08 (6 / 7087)	0.05 (3 / 6609)
Mast+AC	4.82 (772 / 16031)	1.12 (107 / 9526)	0.38 (20 / 5314)	0.08 (4 / 5222)
Rate ratio, from (O-E) / V	0.28 SE 0.04 -295.7 / 233.8	0.35 SE 0.10 -38.4 / 36.2	0.26 SE 0.23 -7.5 / 5.5	0.72 SE 0.73 -0.5 / 1.4



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

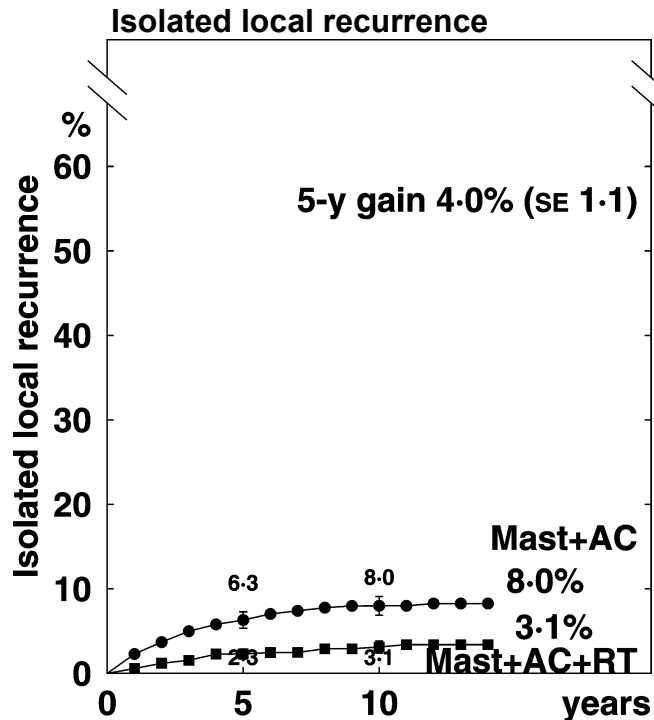
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	6.73 (1409 / 20925)	4.36 (623 / 14281)	3.05 (272 / 8920)	2.86 (229 / 8021)
Mast+AC	7.26 (1418 / 19538)	5.32 (669 / 12565)	3.84 (286 / 7444)	2.54 (167 / 6573)
Rate ratio, from (O-E) / V	0.95 SE 0.04 -33.4 / 622.3	0.84 SE 0.05 -50.4 / 288.5	0.84 SE 0.08 -22.4 / 124.0	1.19 SE 0.12 13.9 / 80.0



Death rates (% / year) and logrank analyses

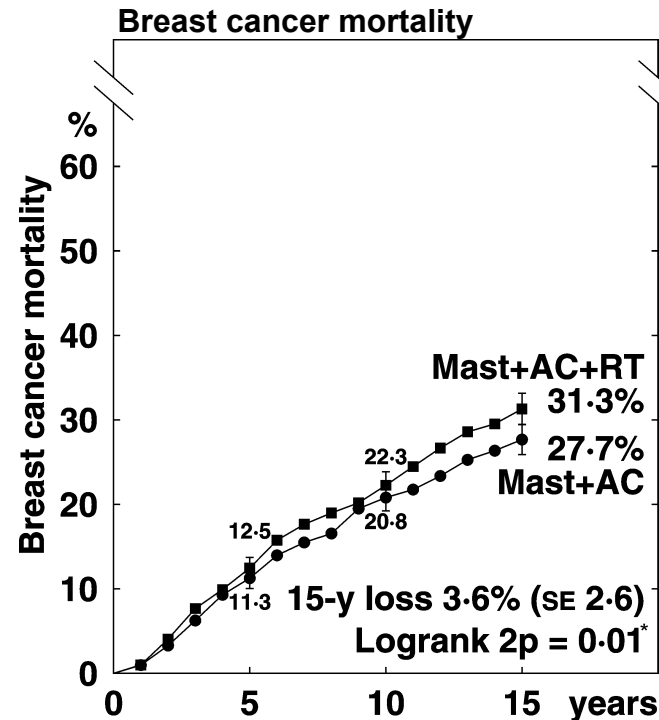
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	7.20 (1507 / 20925)	5.29 (756 / 14281)	4.30 (384 / 8920)	5.62 (451 / 8021)
Mast+AC	7.70 (1504 / 19538)	6.09 (765 / 12565)	4.82 (359 / 7444)	4.69 (308 / 6573)
Rate ratio, from (O-E) / V	0.95 SE 0.04 -34.5 / 666.2	0.88 SE 0.05 -44.9 / 341.9	0.90 SE 0.07 -17.4 / 164.6	1.27 SE 0.09 37.9 / 156.5

**Webfigure 2b: Radiotherapy after mastectomy with axillary clearance (Mast+AC±RT) in women with node-negative disease — 15-year outcome (life-table curves: 1428 women)**



Isolated local recurrence rates (% / year) and logrank analyses

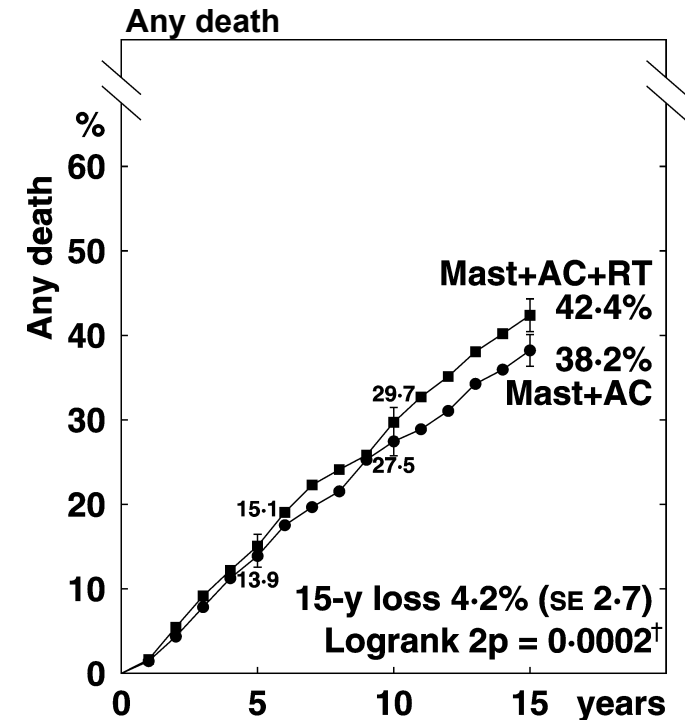
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	0.44 (13 / 2926)	0.17 (4 / 2351)	0.07 (1 / 1528)	0.0(0/2234)
Mast+AC	1.36 (41 / 3014)	0.38 (9 / 2383)	0.13 (2 / 1581)	0.0(0/2722)
Rate ratio, from (O-E) / V	0.38 SE 0.18 -12.6 / 13.0	0.47 SE 0.39 -2.4 / 3.2	1.06 SE 1.46 0.0 / 0.5	



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	2.61 (85 / 3256)	2.30 (62 / 2694)	2.55 (52 / 2043)	2.70 (73 / 2708)
Mast+AC	2.40 (81 / 3369)	2.37 (67 / 2823)	1.80 (40 / 2227)	1.77 (58 / 3281)
Rate ratio, from (O-E) / V	1.12 SE 0.17 4.2 / 38.5	1.05 SE 0.19 1.5 / 29.6	1.39 SE 0.25 7.1 / 21.7	1.65 SE 0.25 14.1 / 28.1

\* Excluding data beyond year 15: 2p= 0.18

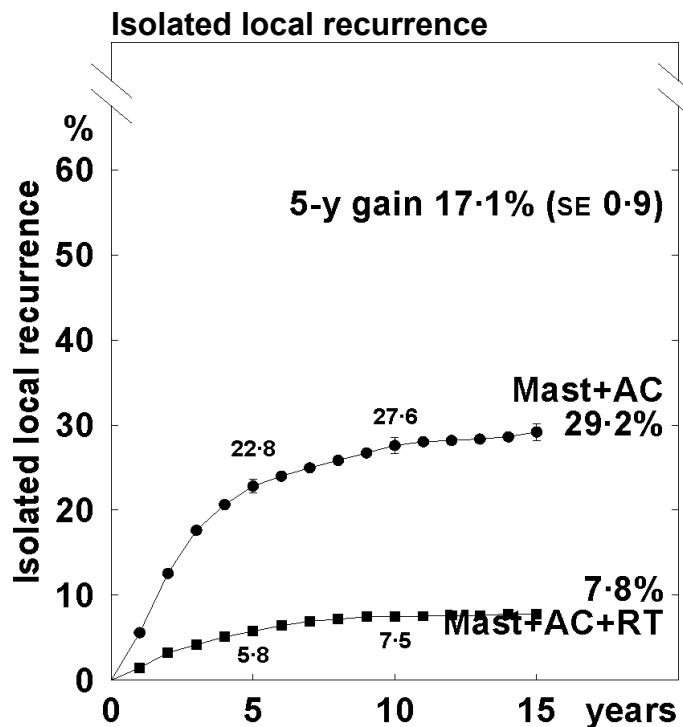


Death rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	3.26 (106 / 3256)	3.71 (100 / 2694)	4.06 (83 / 2043)	6.24 (169 / 2708)
Mast+AC	2.97 (100 / 3369)	3.51 (99 / 2823)	3.14 (70 / 2227)	4.11 (135 / 3281)
Rate ratio, from (O-E) / V	1.10 SE 0.15 4.5 / 48.1	1.11 SE 0.15 4.7 / 46.6	1.26 SE 0.19 8.5 / 36.2	1.69 SE 0.16 35.1 / 67.2

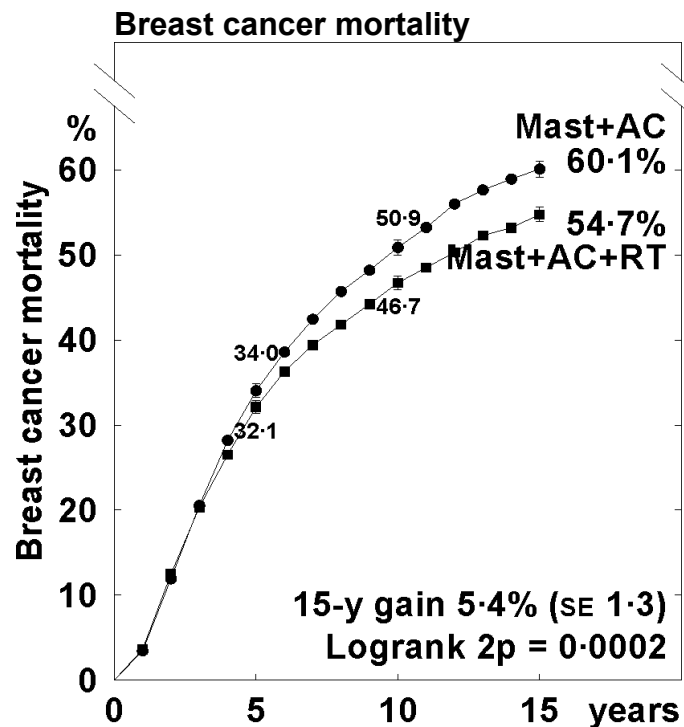
†Excluding data beyond year 15: 2p=0.12

**Webfigure 2c: Radiotherapy after mastectomy with axillary clearance (Mast+AC±RT) in all women with node-positive disease — 15-year outcome** (life-table curves: 8505 women, many with the actual number of involved nodes unknown)



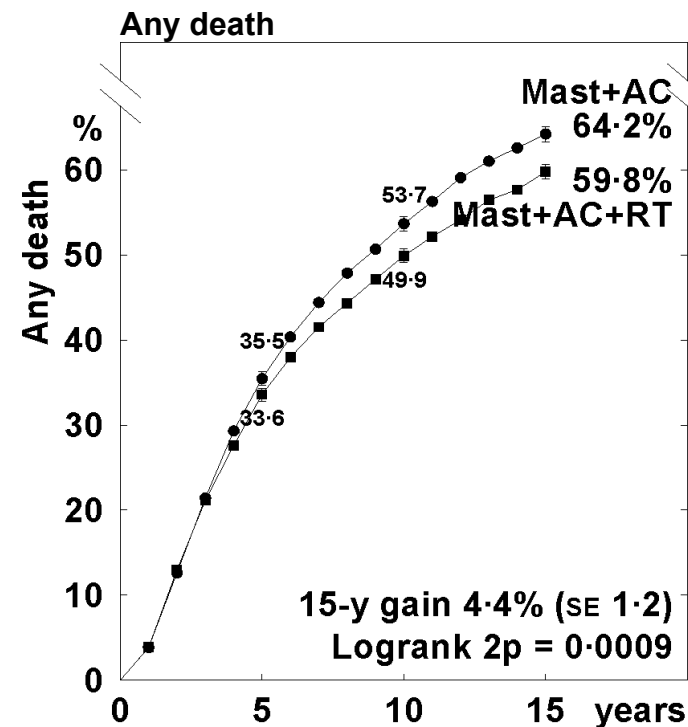
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	1.39 (214 / 15416)	0.44 (42 / 9625)	0.09 (5 / 5559)	0.07 (3 / 4375)
Mast+AC	5.62 (731 / 13017)	1.37 (98 / 7143)	0.48 (18 / 3733)	0.16 (4 / 2500)
Rate ratio, from (O-E) / V	0.28 SE 0.04 -283.2 / 220.9	0.34 SE 0.11 -35.9 / 33.0	0.22 SE 0.23 -7.6 / 5.0	0.72 SE 0.73 -0.5 / 1.4



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

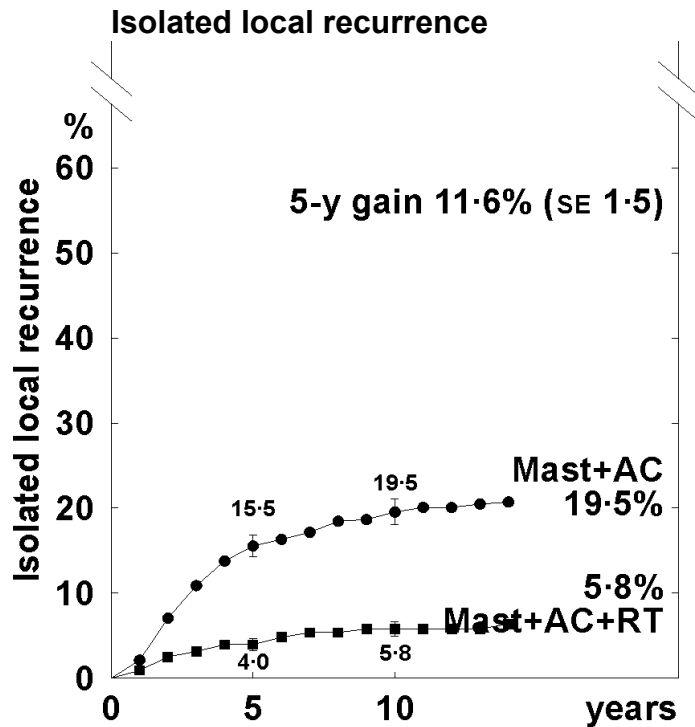
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	7.49 (1324 / 17669)	4.84 (561 / 11587)	3.20 (220 / 6877)	2.94 (156 / 5313)
Mast+AC	8.27 (1337 / 16169)	6.18 (602 / 9742)	4.72 (246 / 5217)	3.31 (109 / 3292)
Rate ratio, from (O-E) / V	0.94 SE 0.04 -37.7 / 583.8	0.82 SE 0.06 -51.9 / 259.0	0.75 SE 0.09 -29.5 / 102.2	1.00 SE 0.14 -0.2 / 52.0



Death rates (% / year) and logrank analyses

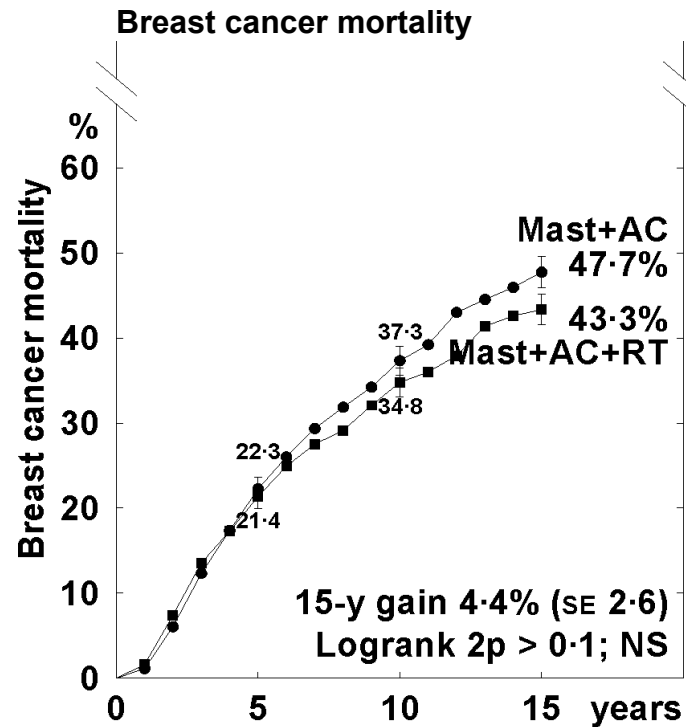
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	7.93 (1401 / 17669)	5.66 (656 / 11587)	4.38 (301 / 6877)	5.31 (282 / 5313)
Mast+AC	8.68 (1404 / 16169)	6.84 (666 / 9742)	5.54 (289 / 5217)	5.26 (173 / 3292)
Rate ratio, from (O-E) / V	0.94 SE 0.04 -38.9 / 618.1	0.85 SE 0.05 -49.7 / 295.3	0.82 SE 0.08 -25.9 / 128.4	1.03 SE 0.11 2.8 / 89.3

**Webfigure 2d: Radiotherapy after mastectomy with axillary clearance (Mast+AC±RT) in women with 1-3 involved lymph nodes (pN1-3) — 15-year outcome (life-table curves:1890 women)**



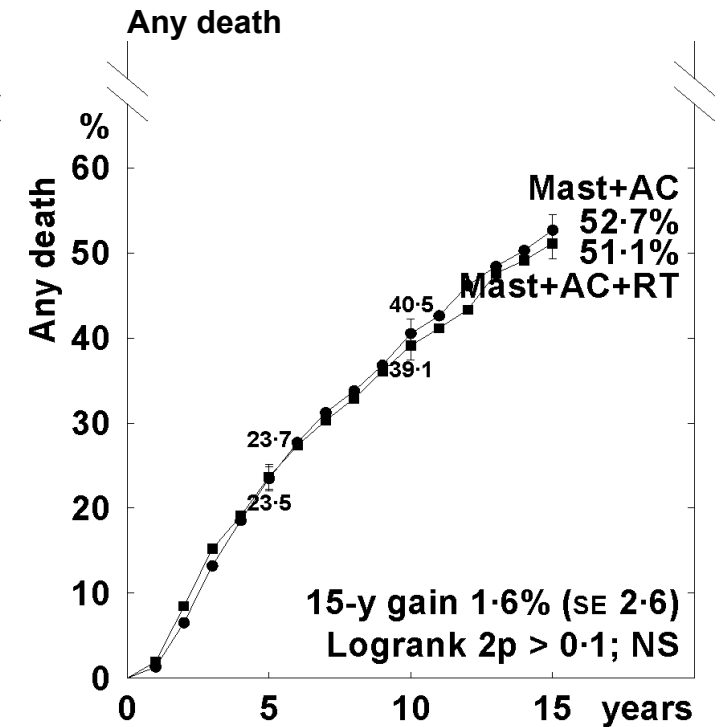
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	0.85 (32 / 3749)	0.41 (10 / 2427)	0.15 (2 / 1370)	0.08 (1 / 1237)
Mast+AC	3.40 (125 / 3675)	0.99 (22 / 2214)	0.59 (7 / 1184)	0.10 (1 / 1016)
Rate ratio, from (O-E) / V	0.29 SE 0.09 -45.8 / 37.2	0.44 SE 0.25 -6.4 / 7.8	0.26 SE 0.38 -2.8 / 2.1	1.24 SE 1.63 0.1 / 0.5



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

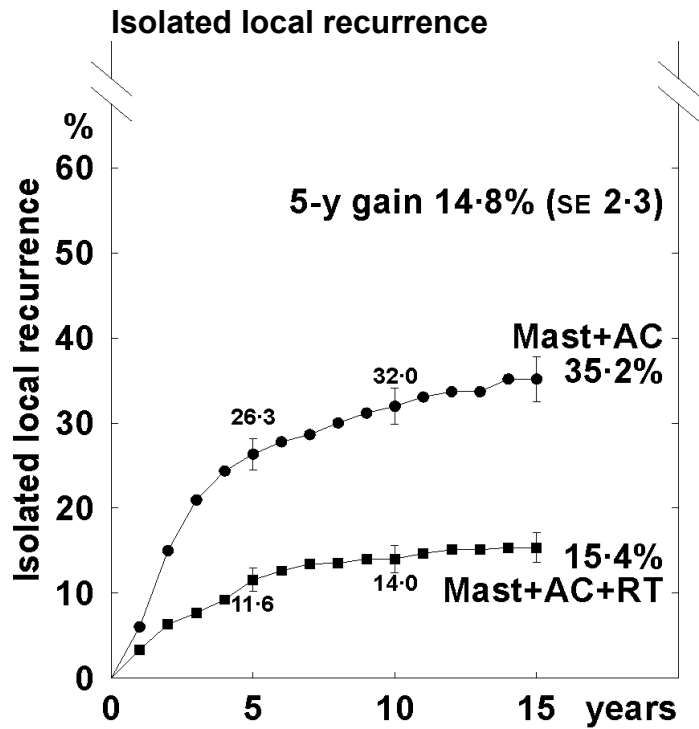
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	4.73 (195 / 4121)	3.75 (107 / 2855)	2.66 (49 / 1840)	2.74 (43 / 1569)
Mast+AC	4.92 (210 / 4267)	4.33 (124 / 2861)	3.92 (69 / 1762)	2.74 (38 / 1386)
Rate ratio, from (O-E) / V	0.97 SE 0.10 -3.1 / 92.7	0.86 SE 0.13 -7.9 / 52.8	0.75 SE 0.17 -7.7 / 27.1	1.15 SE 0.27 2.4 / 16.5



Death rates (% / year) and logrank analyses

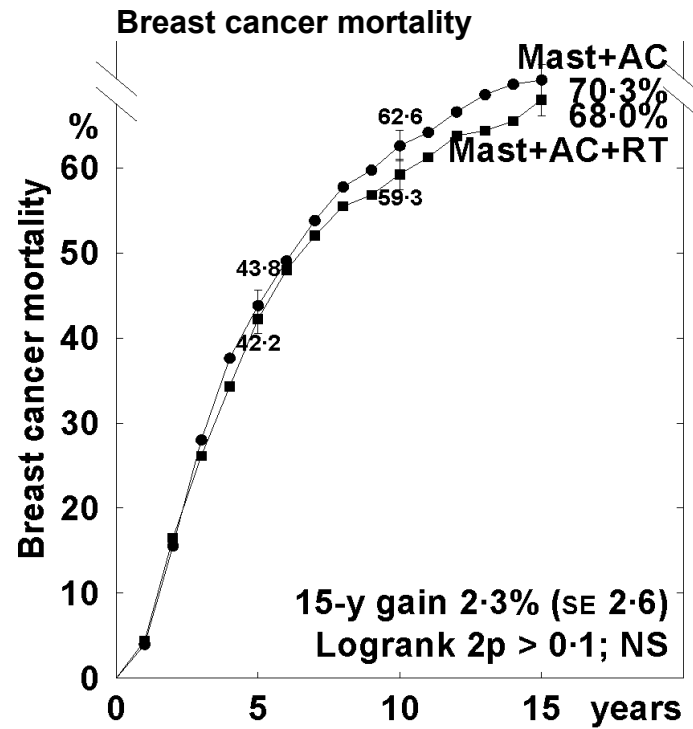
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	5.34 (220 / 4121)	4.55 (130 / 2855)	4.24 (78 / 1840)	4.91 (77 / 1569)
Mast+AC	5.23 (223 / 4267)	5.00 (143 / 2861)	4.71 (83 / 1762)	4.76 (66 / 1386)
Rate ratio, from (O-E) / V	1.03 SE 0.10 2.5 / 101.9	0.89 SE 0.12 -7.3 / 62.8	0.95 SE 0.16 -1.8 / 36.9	1.05 SE 0.19 1.4 / 30.0

**Webfigure 2e: Radiotherapy after mastectomy with axillary clearance (Mast+AC±RT) in women with 4 or more involved lymph nodes (pN4+) — 15-year outcome (life-table curves: 1868 women)**



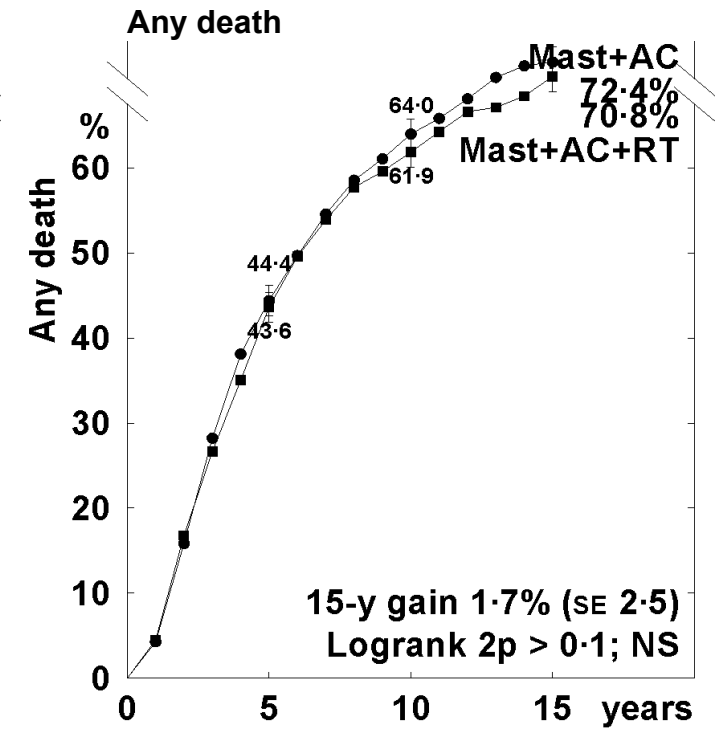
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	2.88 (86 / 2985)	0.71 (10 / 1412)	0.46 (3 / 652)	0.0(0/251)
Mast+AC	6.48 (172 / 2655)	1.62 (18 / 1114)	1.09 (5 / 459)	1.18 (2 / 169)
Rate ratio, from (O-E) / V	0.41 SE 0.09 -52.0 / 58.9	0.41 SE 0.26 -5.6 / 6.2	0.45 SE 0.55 -1.3 / 1.6	0.24 SE 0.84 -0.6 / 0.4



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

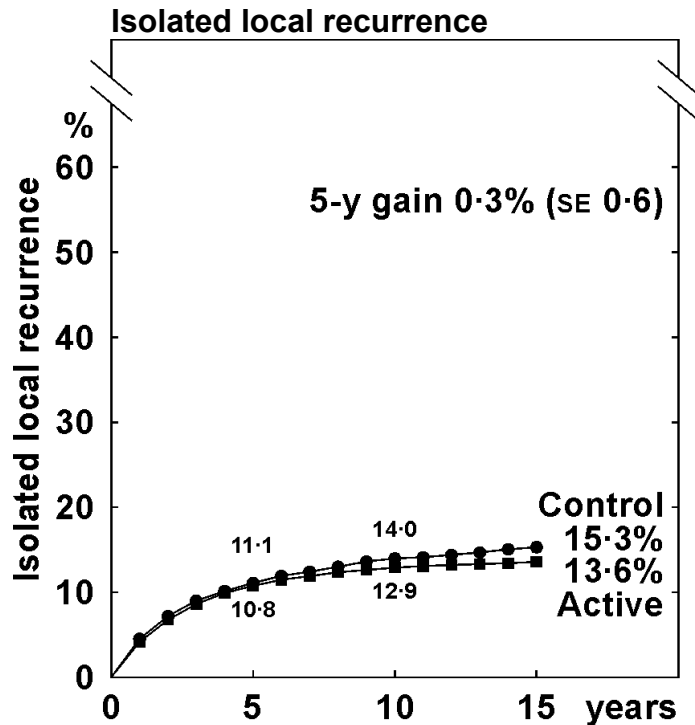
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	10.63 (390 / 3668)	7.49 (139 / 1856)	5.10 (45 / 883)	3.74 (13 / 348)
Mast+AC	11.08 (389 / 3511)	8.29 (141 / 1700)	4.63 (36 / 778)	7.12 (21 / 295)
Rate ratio, from (O-E) / V	0.95 SE 0.08 -8.4 / 164.1	0.87 SE 0.12 -8.0 / 59.0	1.01 SE 0.25 0.2 / 16.3	0.28 SE 0.25 -6.7 / 5.3



Death rates (% / year) and logrank analyses

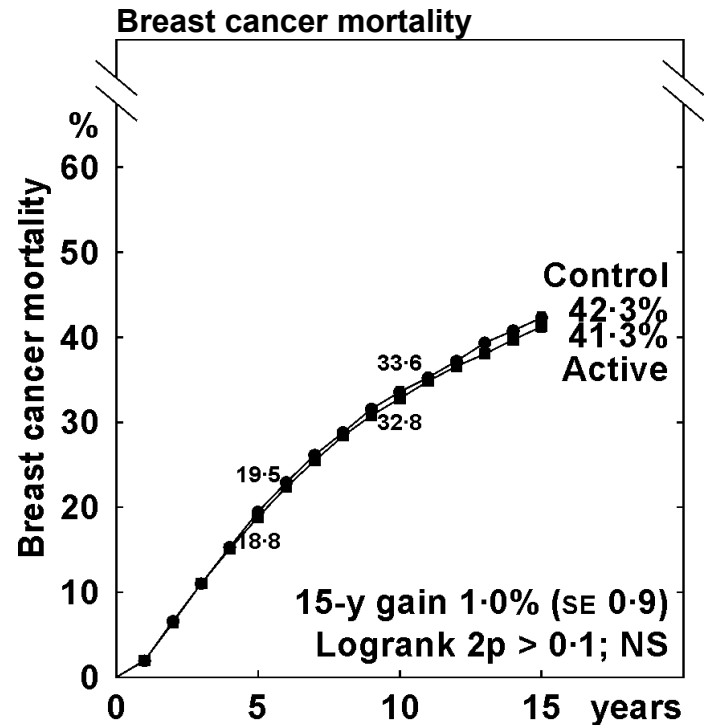
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Mast+AC+RT	11.04 (405 / 3668)	8.41 (156 / 1856)	5.89 (52 / 883)	8.05 (28 / 348)
Mast+AC	11.28 (396 / 3511)	8.71 (148 / 1700)	5.14 (40 / 778)	7.46 (22 / 295)
Rate ratio, from (O-E) / V	0.97 SE 0.08 -5.0 / 169.4	0.92 SE 0.12 -5.3 / 64.2	1.00 SE 0.23 0.1 / 18.3	0.57 SE 0.28 -4.1 / 7.2

**Webfigure 3a: 12 types of treatment comparison that yield <10% isolated local recurrence risk reduction — 15-year outcome**  
 (life-table curves: 16 804 women, 43% with node-positive disease)



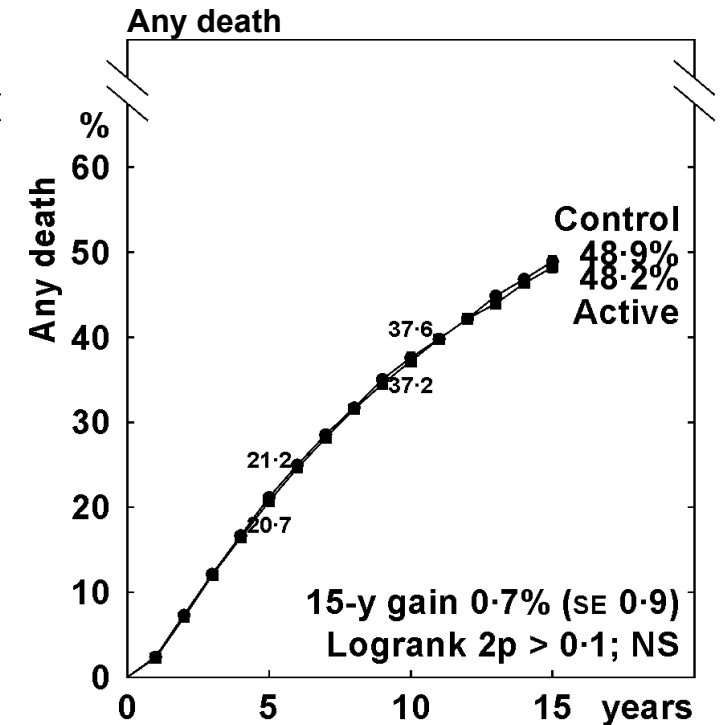
Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Active	2.46 (595 / 24211)	0.50 (83 / 16452)	0.16 (17 / 10904)	0.13 (14 / 11192)
Control	2.50 (612 / 24476)	0.67 (110 / 16413)	0.30 (33 / 10829)	0.15 (17 / 11162)
Rate ratio, from (O-E) / V	0.97 SE 0.06 -8.8 / 260.5	0.75 SE 0.13 -13.6 / 46.8	0.53 SE 0.22 -7.5 / 11.8	0.88 SE 0.36 -0.9 / 7.0



Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

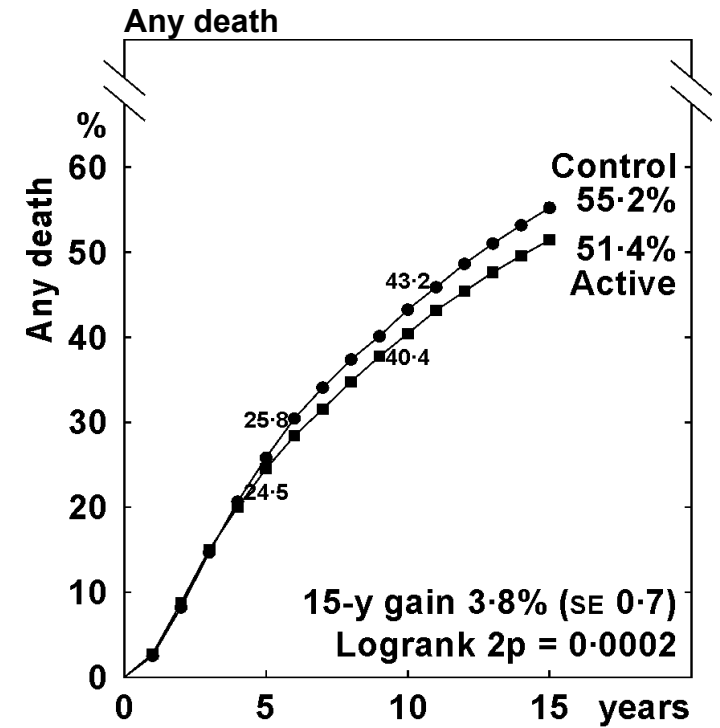
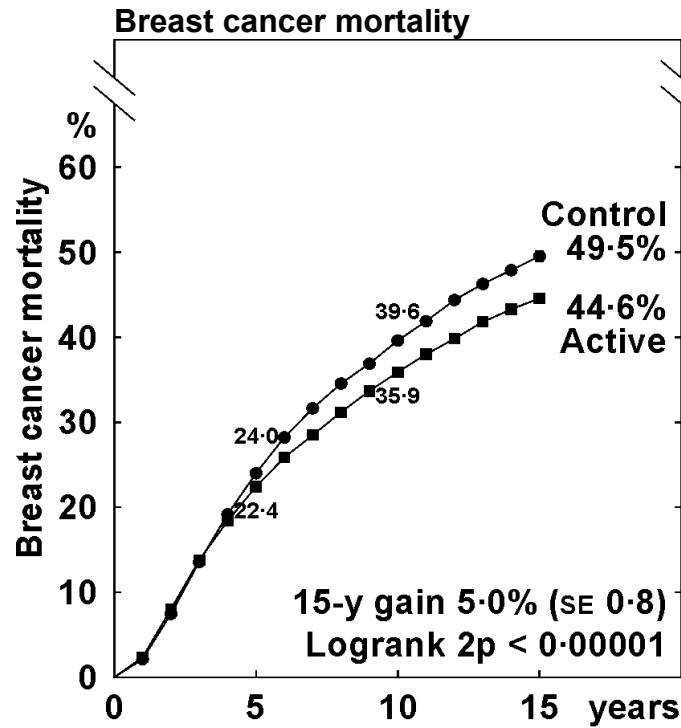
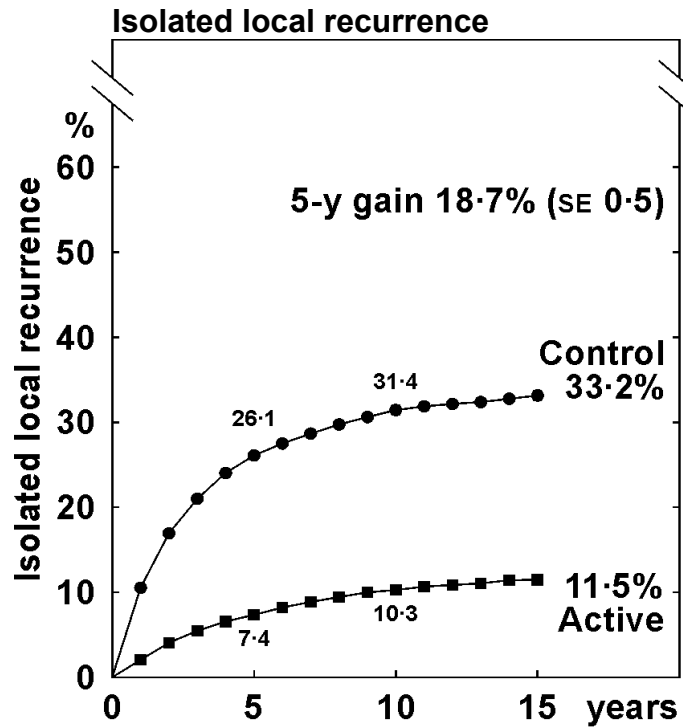
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Active	4.13 (1515 / 36680)	3.85 (864 / 22420)	2.72 (374 / 13729)	2.15 (314 / 14606)
Control	4.24 (1568 / 36942)	3.94 (891 / 22610)	2.82 (396 / 14062)	2.13 (310 / 14585)
Rate ratio, from (O-E) / V	0.97 SE 0.04 -23.9 / 695.8	0.98 SE 0.05 -6.6 / 398.7	0.96 SE 0.07 -7.7 / 178.2	1.00 SE 0.09 0.7 / 135.9



Death rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Active	4.58 (1680 / 36680)	4.70 (1054 / 22420)	3.95 (542 / 13729)	4.83 (705 / 14606)
Control	4.67 (1726 / 36942)	4.73 (1069 / 22610)	3.94 (554 / 14062)	4.68 (682 / 14585)
Rate ratio, from (O-E) / V	0.97 SE 0.04 -21.2 / 774.5	1.00 SE 0.05 0.8 / 485.8	0.97 SE 0.06 -6.8 / 254.3	1.01 SE 0.06 2.8 / 303.2

**Webfigure 3b: 12 types of treatment comparison that yield >10% isolated local recurrence risk reduction — 15-year outcome**  
 (life-table curves: 25 276 women, 51% with node-positive disease)



Isolated local recurrence rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Active	1.79 (847 / 47198)	0.71 (213 / 29957)	0.29 (48 / 16332)	0.10 (11 / 11290)
Control	6.61 (2704 / 40931)	1.60 (375 / 23486)	0.53 (65 / 12176)	0.24 (19 / 8025)
Rate ratio, from (O-E) / V	0.29 SE 0.02 -1006.2 / 805.9	0.45 SE 0.06 -109.2 / 137.5	0.57 SE 0.15 -14.8 / 26.4	0.37 SE 0.25 -6.6 / 6.6

Death rates (% / year: total rate - rate in women without recurrence) & logrank analyses

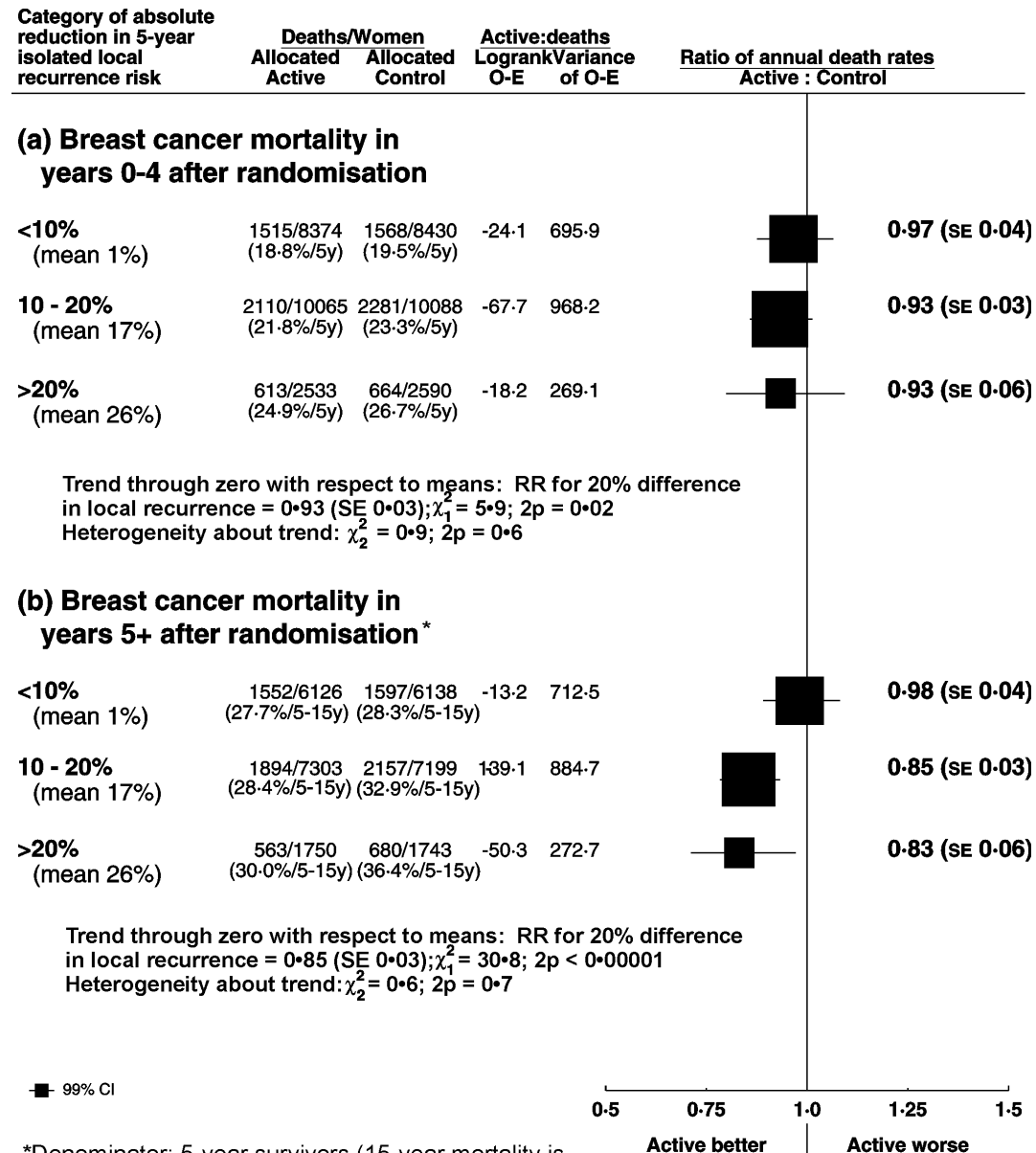
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Active	5.00 (2723 / 54423)	3.81 (1406 / 36897)	2.90 (609 / 21004)	2.37 (442 / 18627)
Control	5.38 (2816 / 52313)	4.75 (1612 / 33933)	3.79 (700 / 18481)	2.47 (386 / 15635)
Rate ratio, from (O-E) / V	0.93 SE 0.03 -85.5 / 1237.2	0.82 SE 0.03 -133.0 / 681.8	0.81 SE 0.05 -62.4 / 295.4	1.03 SE 0.08 6.1 / 180.4

Death rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Active	5.57 (3031 / 54423)	4.75 (1754 / 36897)	4.14 (869 / 21004)	5.11 (951 / 18627)
Control	5.83 (3051 / 52313)	5.44 (1846 / 33933)	4.82 (890 / 18481)	4.66 (729 / 15635)
Rate ratio, from (O-E) / V	0.95 SE 0.03 -72.3 / 1366.0	0.88 SE 0.03 -106.2 / 816.8	0.87 SE 0.05 -57.0 / 394.1	1.10 SE 0.06 34.7 / 359.1

**Webfigure 4: Breast cancer mortality rate ratio by time since randomisation and by category of absolute reduction in 5-year local recurrence risk (from webtable 4)**

Numerators are deaths after recurrence (from any cause), but percentages are life-table estimates of the probabilities of death just from breast cancer (in the absence of any other causes) during the first 5 years (upper part) or, for 5-year survivors, during years 5-15 (lower panel)

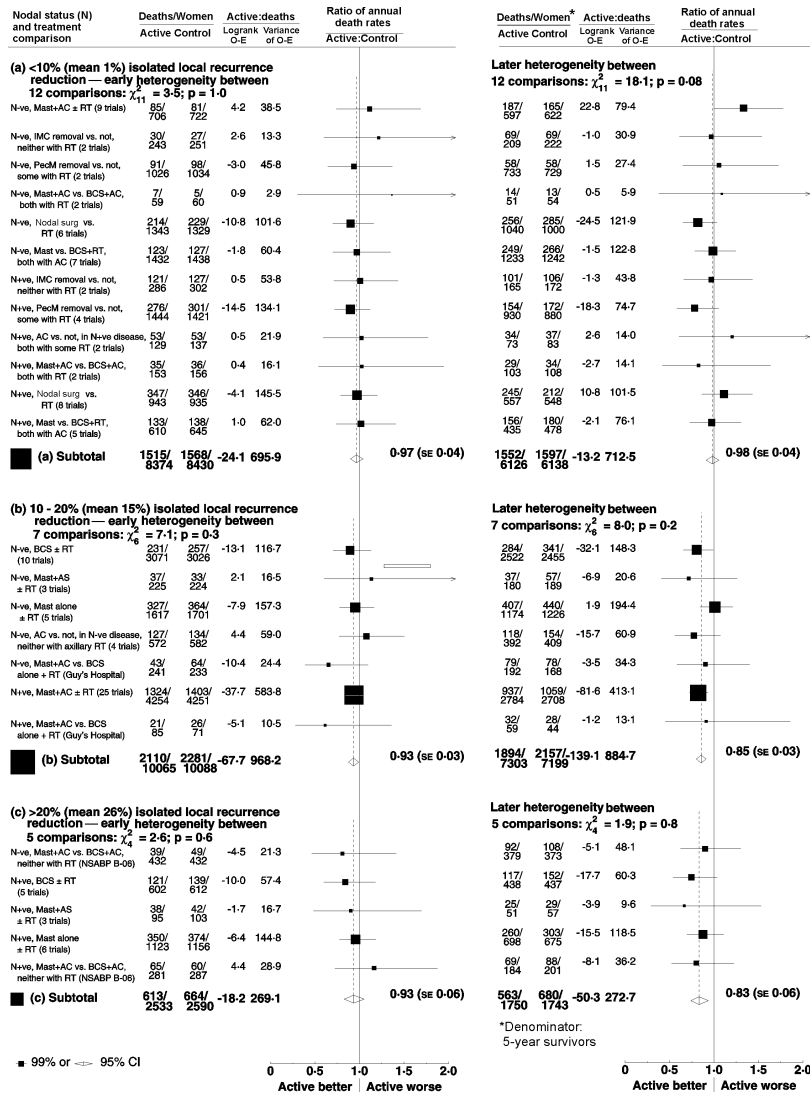


\*Denominator: 5-year survivors (15-year mortality is 5-year mortality plus 5-year survival x 5-15 year mortality)



**Webfigure 5: Homogeneity of 24 breast cancer mortality rate ratios, given the category (<10%, 10-20%, or >20%) of absolute reduction in 5-year local recurrence risk (numerators and denominators as in webfigure 4)**

**Breast cancer mortality**  
**Years 0-4 after randomisation**      **Years 5+ after randomisation**



Sum of 6 heterogeneity test statistics:  $\chi^2_{42} = 41.2; p=0.5$

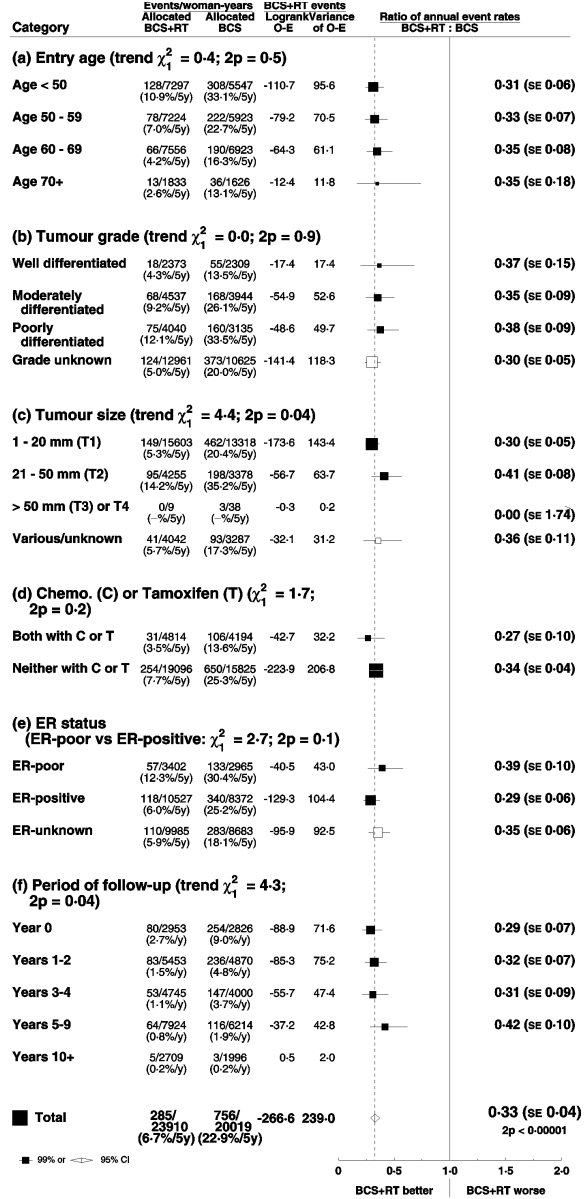
**Footnote to webfigure 5**

**Contribution from different types of treatment comparison** — The evidence in webfigures 4 and 5 that breast cancer mortality after the first 5 years can be reduced comes almost entirely from the two categories of treatment comparison that involved absolute reductions of more than 10% (ie, 10-20% or >20%) in the 5-year isolated local recurrence risk. These two categories comprise 12 of the 24 types of treatment comparison, including 5 comparisons of post-mastectomy radiotherapy. These 5 comparisons yield in total a logrank O-E of -106.0 (-6.9 + 1.9 - 81.6 - 3.9 - 15.5) with variance 756.2, and hence a breast cancer mortality rate ratio of 0.87 SE 0.03, 2p=0.0001. This accounts for about two-thirds of the evidence on breast cancer mortality after the first 5 years. The remainder of the evidence comes in approximately equal measure from the 2 comparisons of post-BCS radiotherapy (O-E -49.8, variance 208.6, breast cancer mortality rate ratio 0.79 SE 0.06, 2p=0.0006) and from the 5 comparisons of more versus less surgery to the breast or axilla (or both) without effective radiotherapy to the conserved tissue (O-E -33.6, variance 192.6, breast cancer mortality rate ratio 0.84 SE 0.07, 2p=0.015). The breast cancer mortality rate ratios corresponding to these 3 groups of comparisons (0.87, 0.79 and 0.84) are not significantly different from each other, even though post-mastectomy radiotherapy and post-BCS radiotherapy usually prevent different types of local recurrence. (The 5 comparisons of more versus less surgery without effective control of local recurrence by radiotherapy included not only mastectomy versus BCS and axillary clearance versus not, both without radiotherapy, but also the Guy's trial of mastectomy with axillary clearance versus BCS+RT that began in 1961, in which the radiotherapy actually given still left a high risk of local recurrence not only around the conserved breast but also in the conserved axilla.)

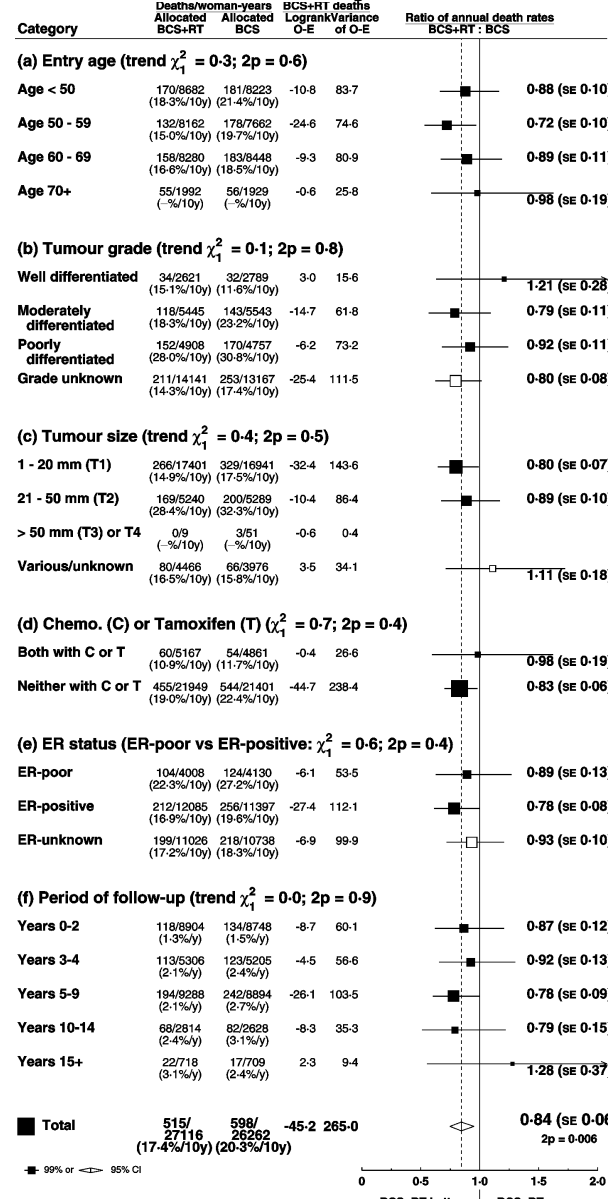
# Webfigure 6a: Radiotherapy after breast conserving surgery in node-negative disease — subgroup analyses

(event rate ratios for all three endpoints, with 5-year risks of local recurrence, 10-year breast cancer mortality risks and crude % for any death; subdivisions by entry age, tumour grade, tumour size, use of systemic therapy in both arms, ER status and time period)

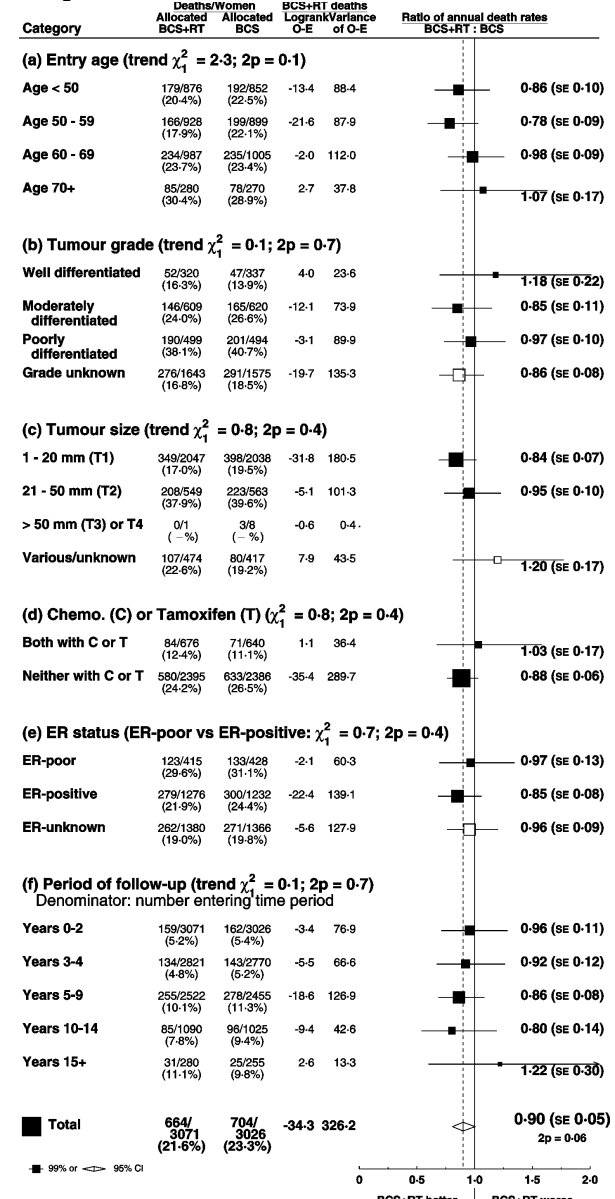
## Isolated local recurrence



## Breast cancer mortality



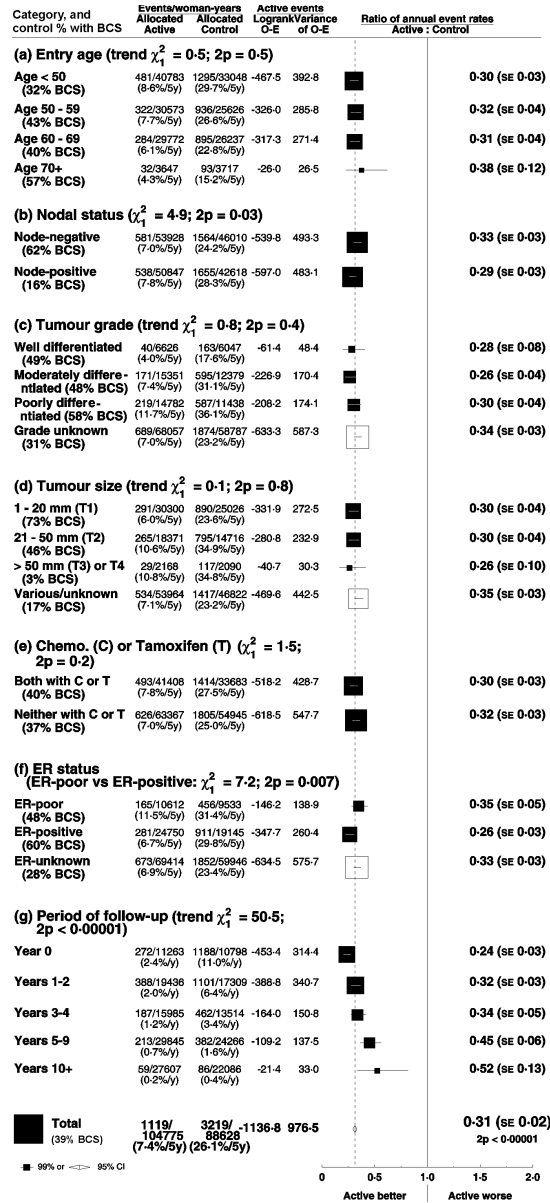
## Any death



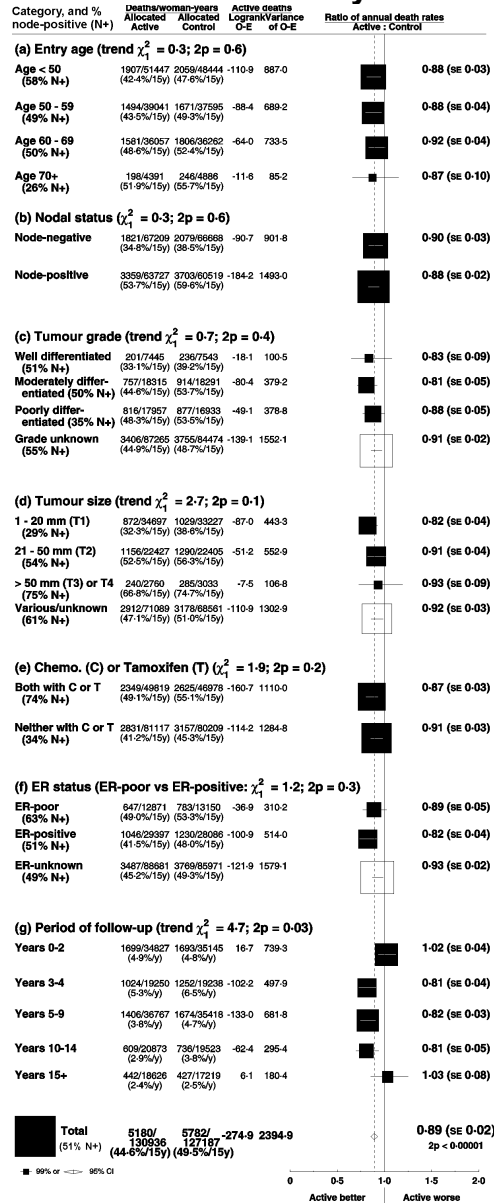


**Webfigure 6c: 12 types of treatment comparison that yield >10% isolated local recurrence risk reduction — subgroup analyses** (event rate ratios for all three endpoints, with 5-year local recurrence risks, 15-year breast cancer mortality risks and crude % for any death; subdivisions by entry age, nodal status, tumour grade, tumour size, use of systemic therapy in both arms, ER status and time period)

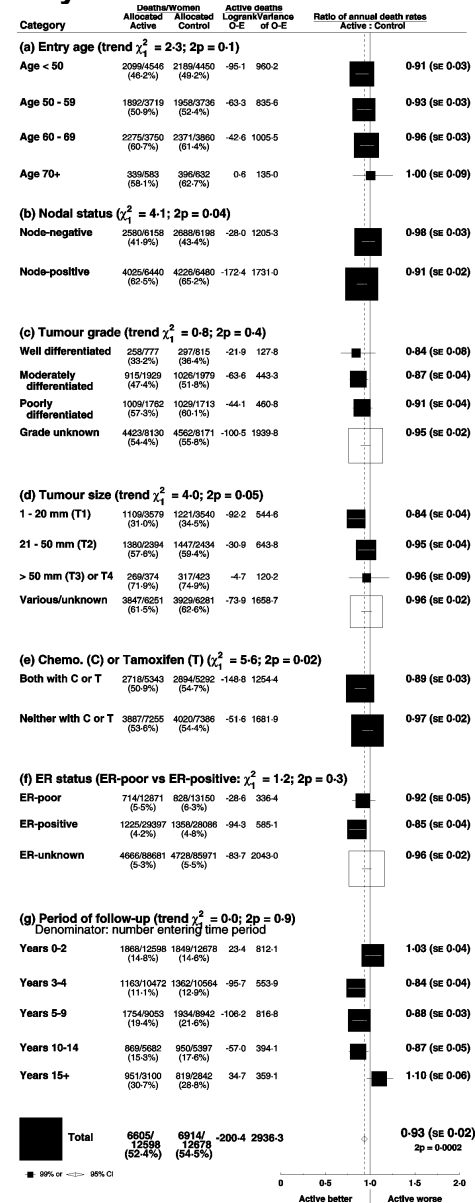
### Isolated local recurrence



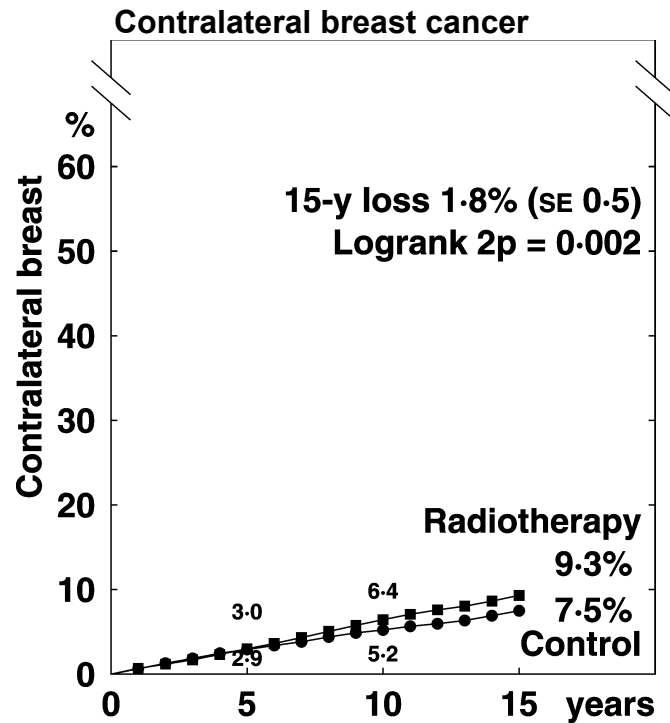
### Breast cancer mortality



### Any death

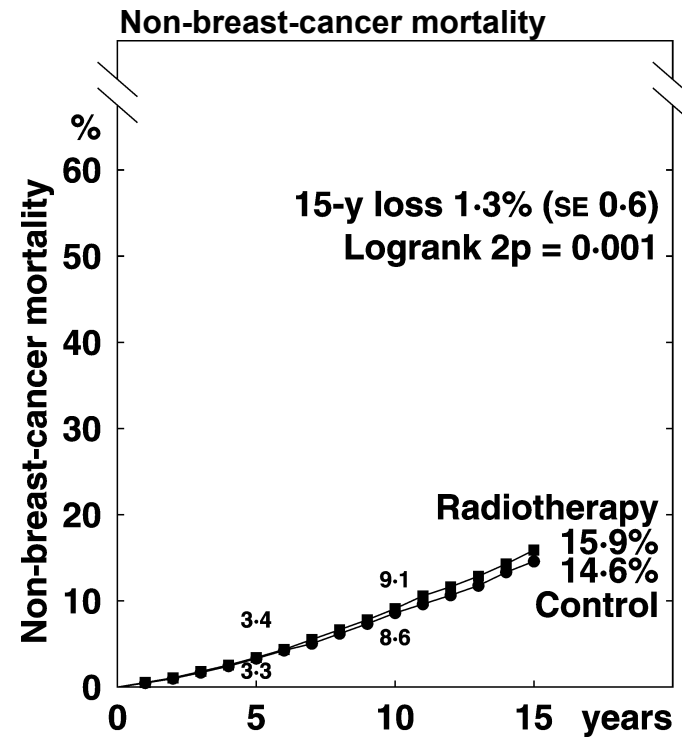


**Webfigure 7: Effect of radiotherapy on contralateral breast cancer incidence and on non-breast-cancer mortality (46 trials of adding radiotherapy, and 17 trials of radiotherapy vs more surgery) — 15-year outcome (life table curves: 29 623 women)**



Contralateral breast cancer rates (% / year) and logrank analyses

	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Radiotherapy	0.61 (346 / 56589)	0.71 (258 / 36134)	0.61 (126 / 20528)	0.48 (77 / 16163)
Control	0.60 (313 / 52408)	0.47 (152 / 32039)	0.47 (85 / 18249)	0.43 (66 / 15410)
Rate ratio, from (O-E) / V	1.01 SE 0.08 1.3 / 161.1	1.49 SE 0.12 39.7 / 99.4	1.31 SE 0.16 13.9 / 50.8	1.06 SE 0.18 2.1 / 33.4



Non-breast-cancer death rates (% / year) and logrank analyses

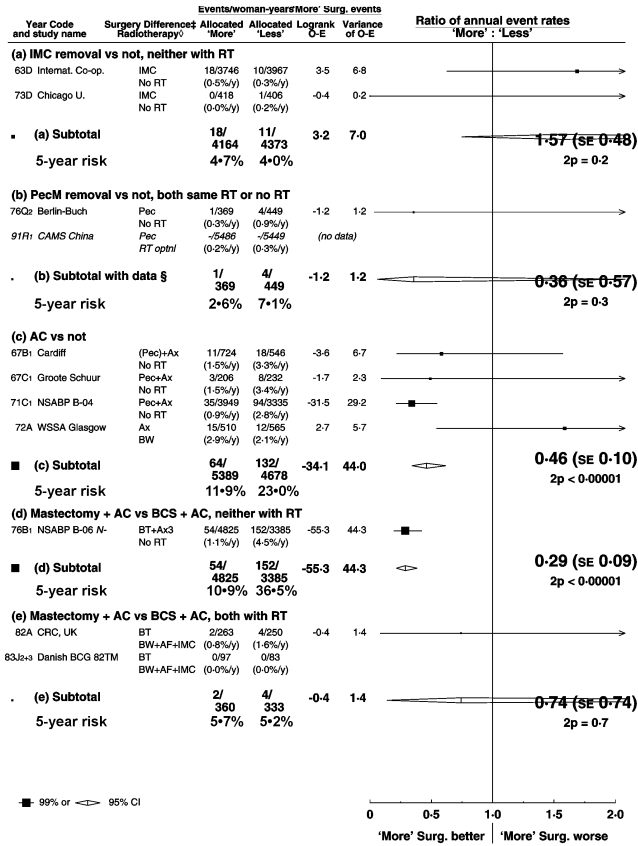
	Years 0 - 4	Years 5 - 9	Years 10 - 14	Year 15+
Radiotherapy	0.68 (388 / 57391)	1.19 (455 / 38347)	1.51 (361 / 23939)	2.86 (731 / 25589)
Control	0.65 (337 / 51812)	1.11 (367 / 33059)	1.34 (280 / 20892)	2.58 (621 / 24026)
Rate ratio, from (O-E) / V	1.04 SE 0.08 7.4 / 176.4	1.08 SE 0.07 15.6 / 197.2	1.16 SE 0.09 22.1 / 151.1	1.17 SE 0.06 49.1 / 306.0



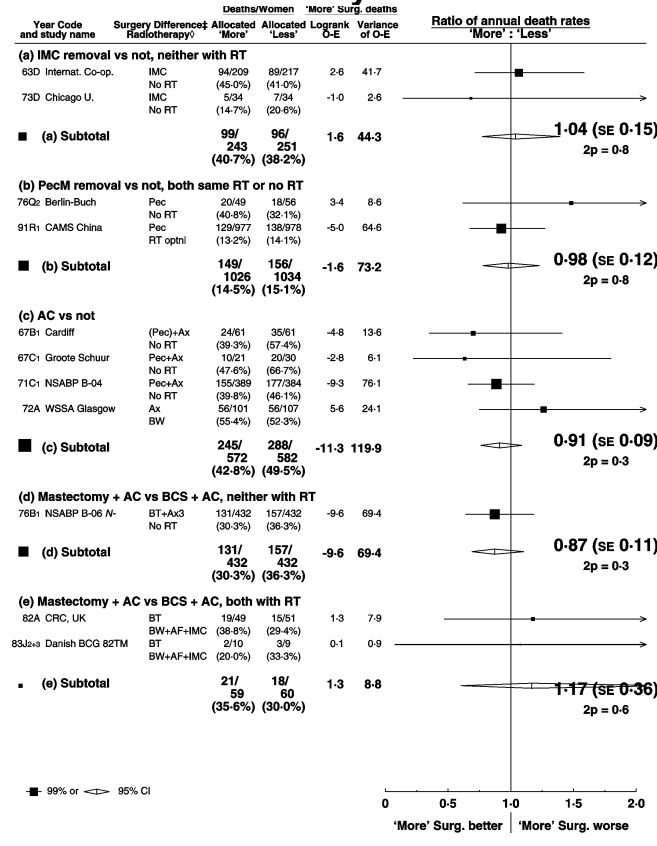


# Webfigure 9a: 'More' surgery versus 'less' surgery, in women with node-negative disease (event rate ratios, one line per trial)

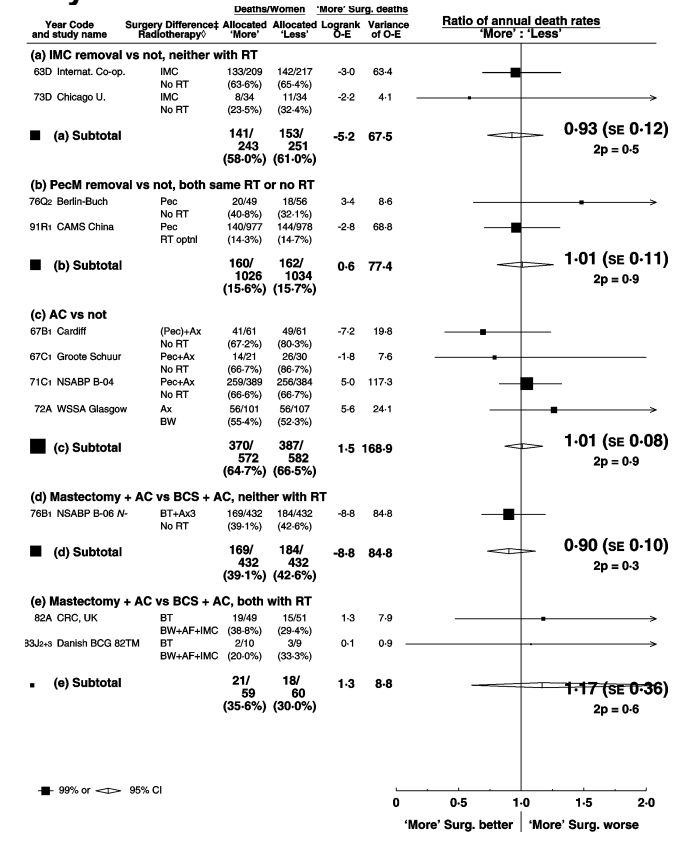
## Isolated local recurrence



## Breast cancer mortality



## Any death

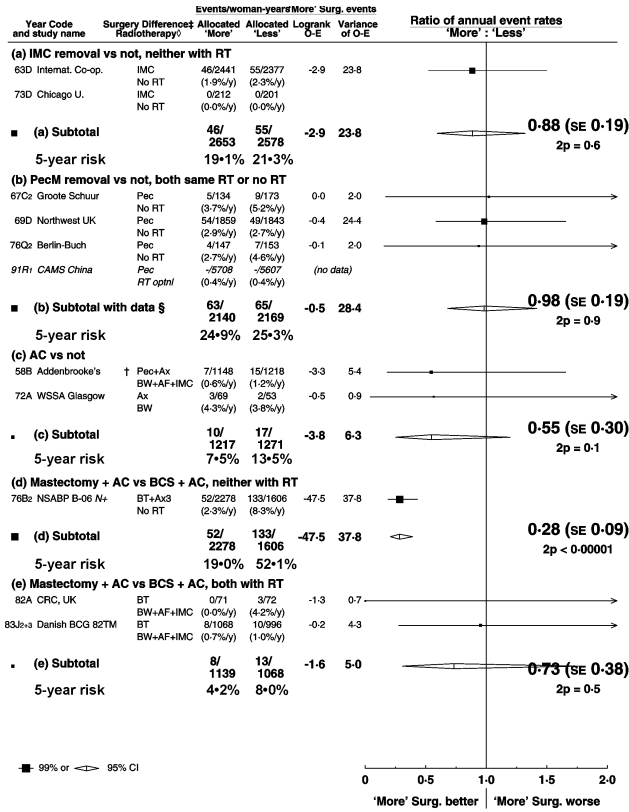


§ 1 trial with no data does not contribute to subtotals or to the overall total (allocated 'More' Surg.: 5496; allocated 'Less' Surg.: 5449)  
 ‡ IMC = Internal mammary chain, Pec = pectoral muscles, Ax = axilla, BT = breast tissue. Surgeries in brackets were not always different between treatment arms.  
 † Similar radiotherapy regimens given in BOTH surgeries. BW=breast/chest wall, AF=Axilla/Fossa, IMC=Internal mammary chain.

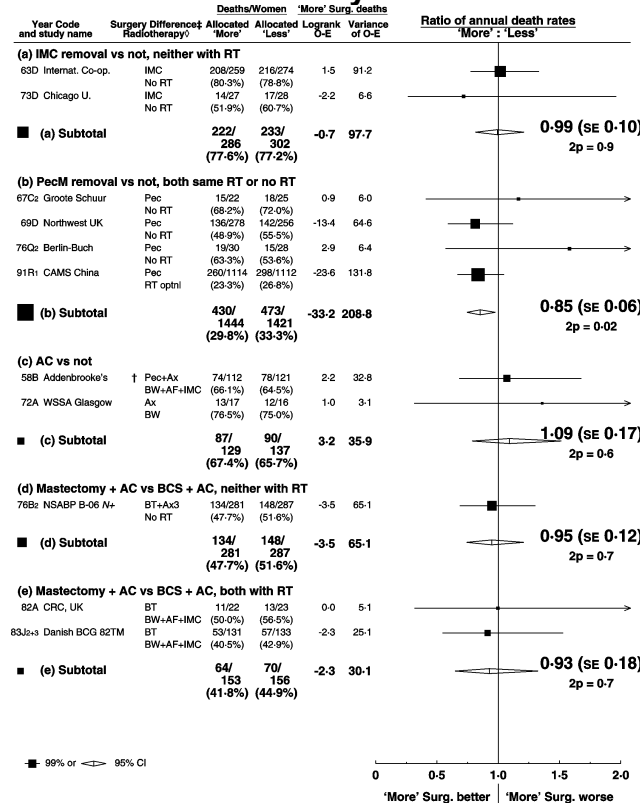


# Webfigure 9b: 'More' surgery versus 'less' surgery, in women with node-positive disease (event rate ratios, one line per trial)

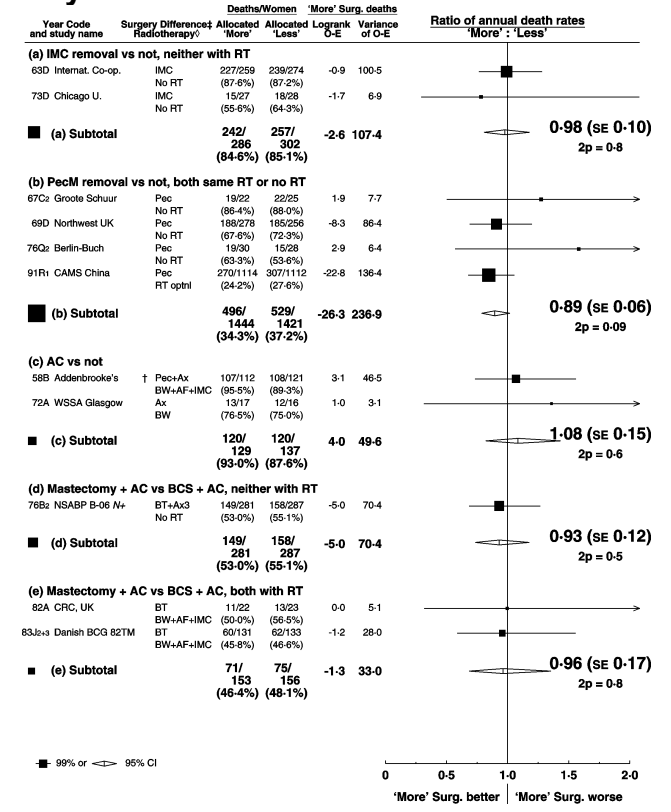
## Isolated local recurrence



## Breast cancer mortality



## Any death

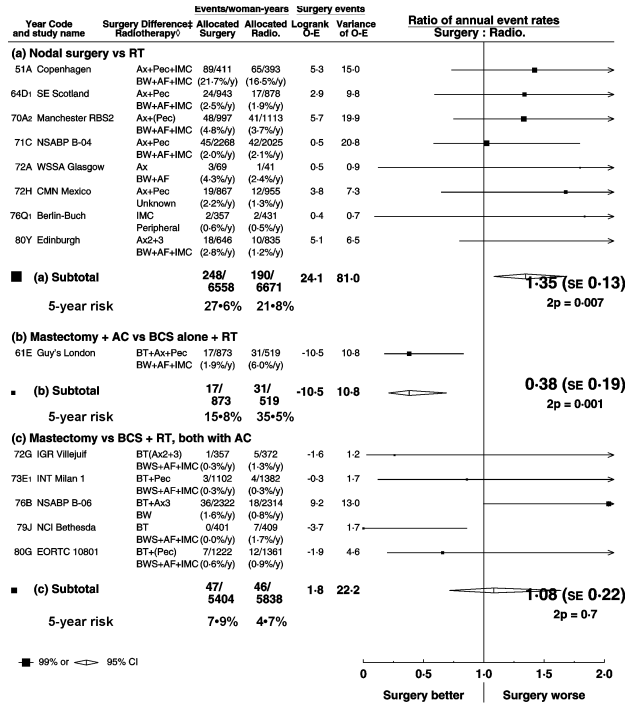


§ 1 trial with no data does not contribute to subtotals or to the overall total (allocated 'More' Surg.: 5708; allocated 'Less' Surg.: 5607)  
 † In radical arm, mammary nodes optionally removed. In simple arm, accessible axillary nodes optionally removed, but no en bloc dissection.  
 ‡ IMC = internal mammary chain, Pec = pectoral muscle, Ax = axilla, BT = breast tissue. Surgeries in brackets were not always different between treatment arms.  
 † Similar radiotherapy regimens given in BOTH surgeries. BW=breast/chest wall, AF=Axilla/Fossa, IMC=Internal mammary chain.

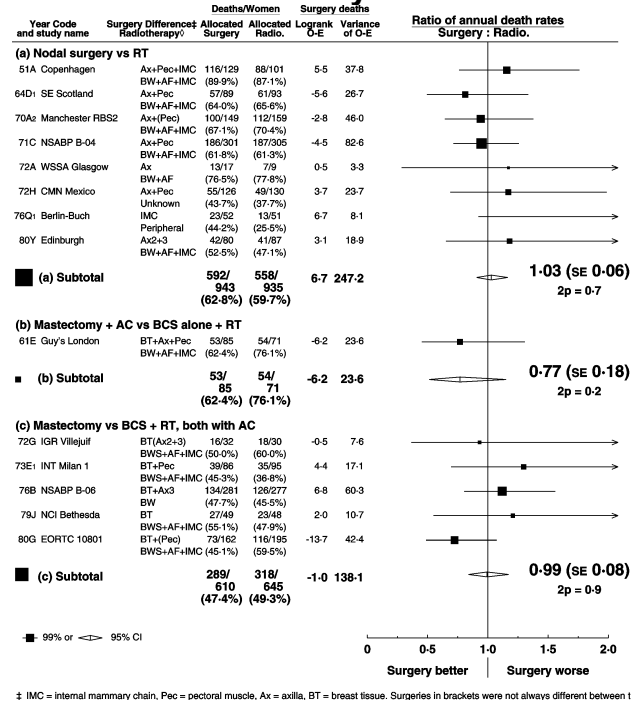


# Webfigure 10b: Surgery versus 'less' surgery plus radiotherapy, in women with node-positive disease (event rate ratios, one line per trial)

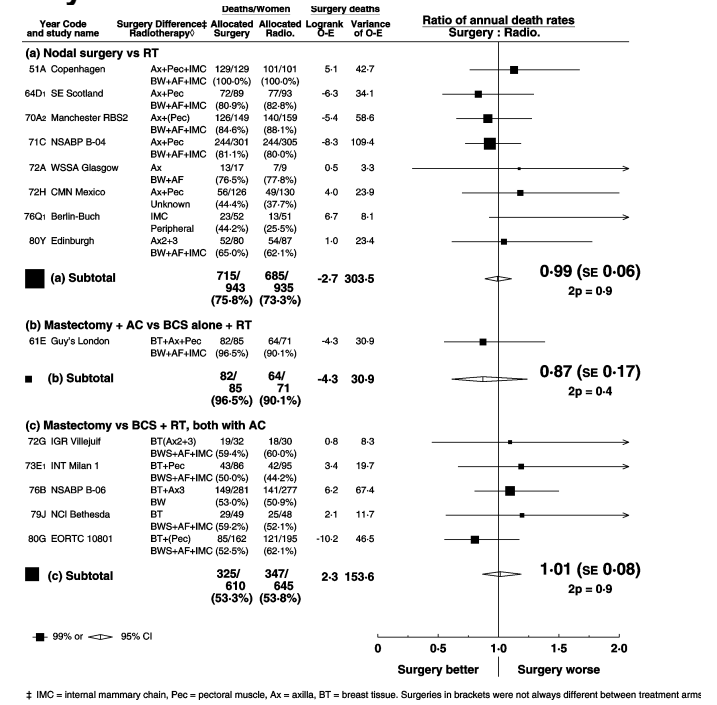
## Isolated local recurrence



## Breast cancer mortality



## Any death



‡ IMC = internal mammary chain, Pec = pectoral muscle, Ax = axilla, BT = breast tissue. Surgeries in brackets were not always different between treatment arms  
 § Women receiving more surgery were either given no radiotherapy or the less radical radiotherapy regimen. BW=breast/chest wall, S+scar (as site of RT boost)  
 AF=Axilla/Fossa, IMC=internal mammary chain. Site(s) in brackets were not always treated

‡ IMC = internal mammary chain, Pec = pectoral muscle, Ax = axilla, BT = breast tissue. Surgeries in brackets were not always different between treatment arms

‡ IMC = internal mammary chain, Pec = pectoral muscle, Ax = axilla, BT = breast tissue. Surgeries in brackets were not always different between treatment arms

