BRUST GESUNDHEITS ZENTRUM
MedUni Wien | AKH Wien

Ist die brusterhaltende Operation nach neoadjuvanter Chemotherapie onkologisch sicher?

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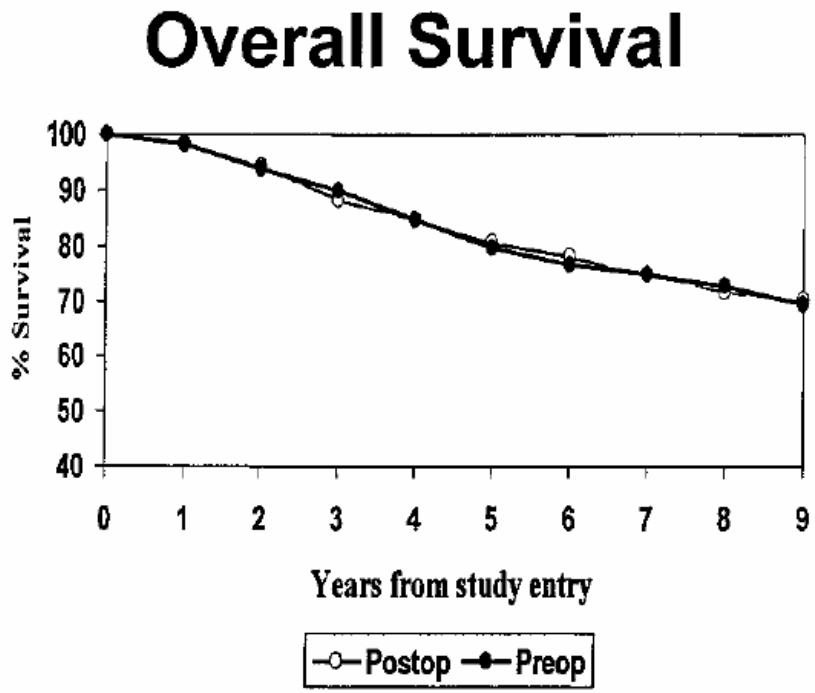
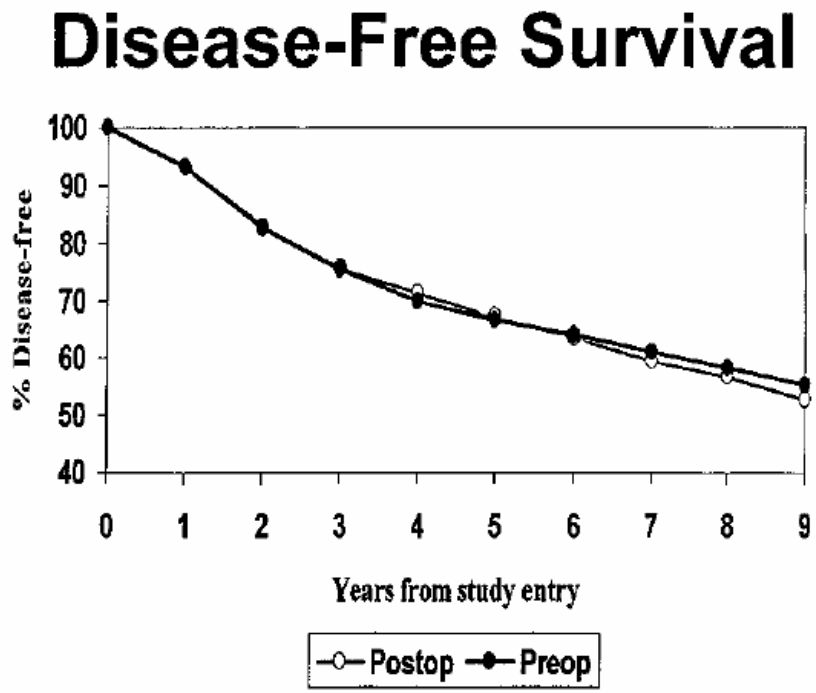
Chirurgie

Was kann die nCT wirklich?





→ ABER Erhöhung der BCT Rate

Wolmark, *JNCI* 2007

BCT erhöht Lebensqualität

Longitudinal data to show sensitivity to change in BIS score

Type of surgery	BIS score (mean/S.D./median/range)	
	2 weeks postop.	4 months postop.
Full sample	2.40 (3.50) 1.00 0–14	6.40 (6.10) 4.00 0–23
WLE	1.59 (2.71) 1.00 0–12	4.24 (5.30) 3.00 0–21
Mx	3.31 (4.09) 2.00[a] 0–14	8.81 (6.13) 9.00[b] 0–23

BIS, body image scale; S.D., standard deviation; WLE, wide local excision; Mx, mastectomy; postop., postoperatively.

Hopwood , *Eur J Cancer* 2001

Was kann die nCT

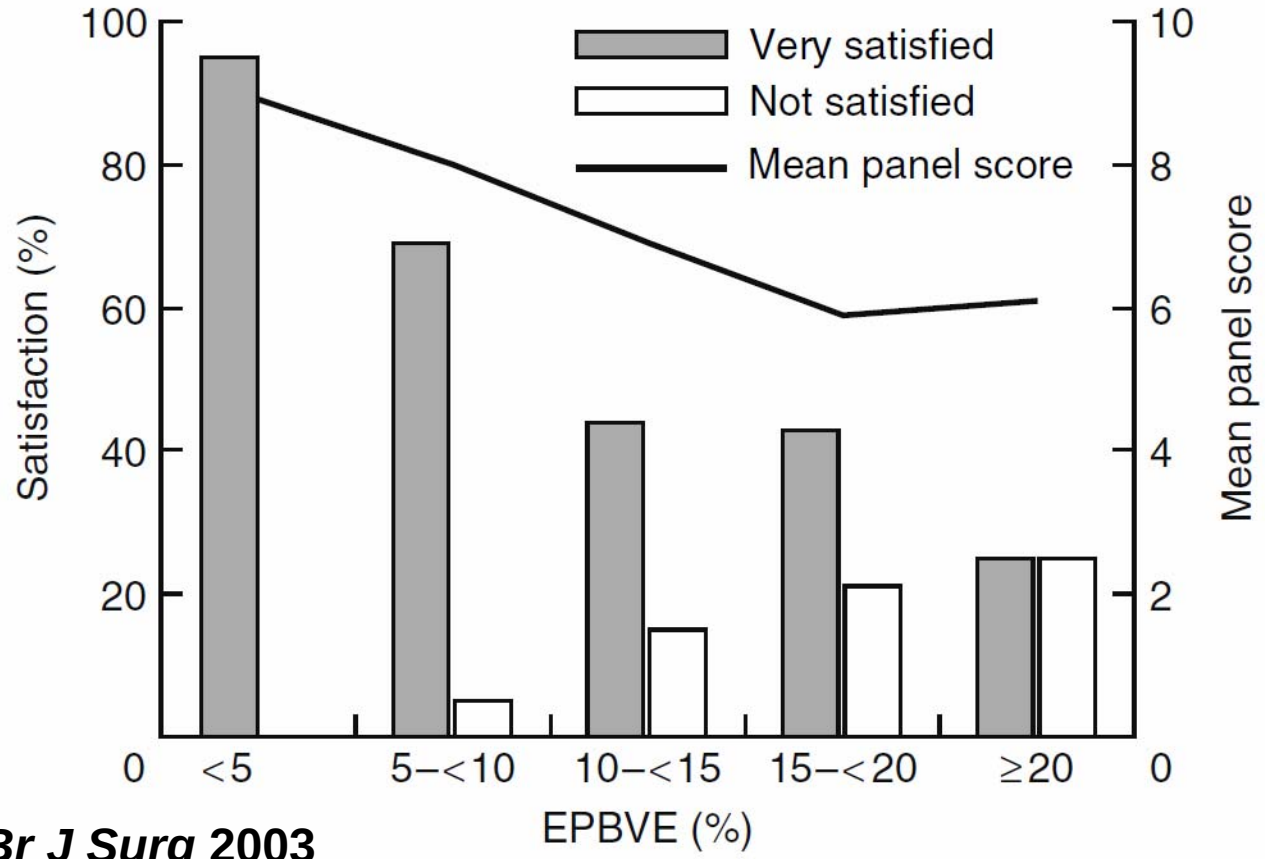
TABLE 3. Volume of Breast Tissue Resected and Re-excision Rates in Patients Who Underwent BCT by Timing of Chemotherapy

Variable	Postoperative Chemotherapy (n = 91)	Preoperative Chemotherapy (n = 150)	*P*
T1 tumors			
Volume of breast tissue resected (cm^3)	98	111	0.51
Median tumor size (cm)	1.50	2.0	0.0055
Re-excision rate [no. (%)]	11 (16)	2 (8)	0.50
T2 or T3 tumors			
Volume of breast tissue resected (cm^3)	213	113	0.0043
Median tumor size (cm)	3.0	3.45	0.13
Re-excision rate [no. (%)]	3 (14)	18 (14)	1

Wolmark, *JNCI* 2007

Was kann die nCT

Exzisionsvolumen korreliert mit Patientenzufriedenheit



Cochrane, *Br J Surg* 2003

Gefahren der Chirurgie

Gefrierschnittdiagnostik ist beeinträchtigt (n=1016)

The likelihood for a patient to undergo a second operation due to false frozen section analysis (FSA) with regard to demographic data

	Odds ratio (95% CI)	*p*
pTis vs others	1.058 (0.445; 2.515)	0.899
pT1 vs others	0.771 (0.458; 1.299)	0.329
G3 vs G1/G2	0.632 (0.3386; 1.035)	0.068
No BX vs BX	7.675 (3.551; 16.587)	<0.0001
Radioguided vs not	5.683 (1.958; 16.494)	0.0014
Neoadjuvant vs not	10.621 (6.321; 17.845)	<0.0001

The table shows *p*-values (<0.05 is significantly different) and the odds ratio (RR) with a 95% confidence interval (CI).

Riedl und Fitzal et al, *EJSO* 2008

Was kann die nCT

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Wolmark, *JNCI* 2007

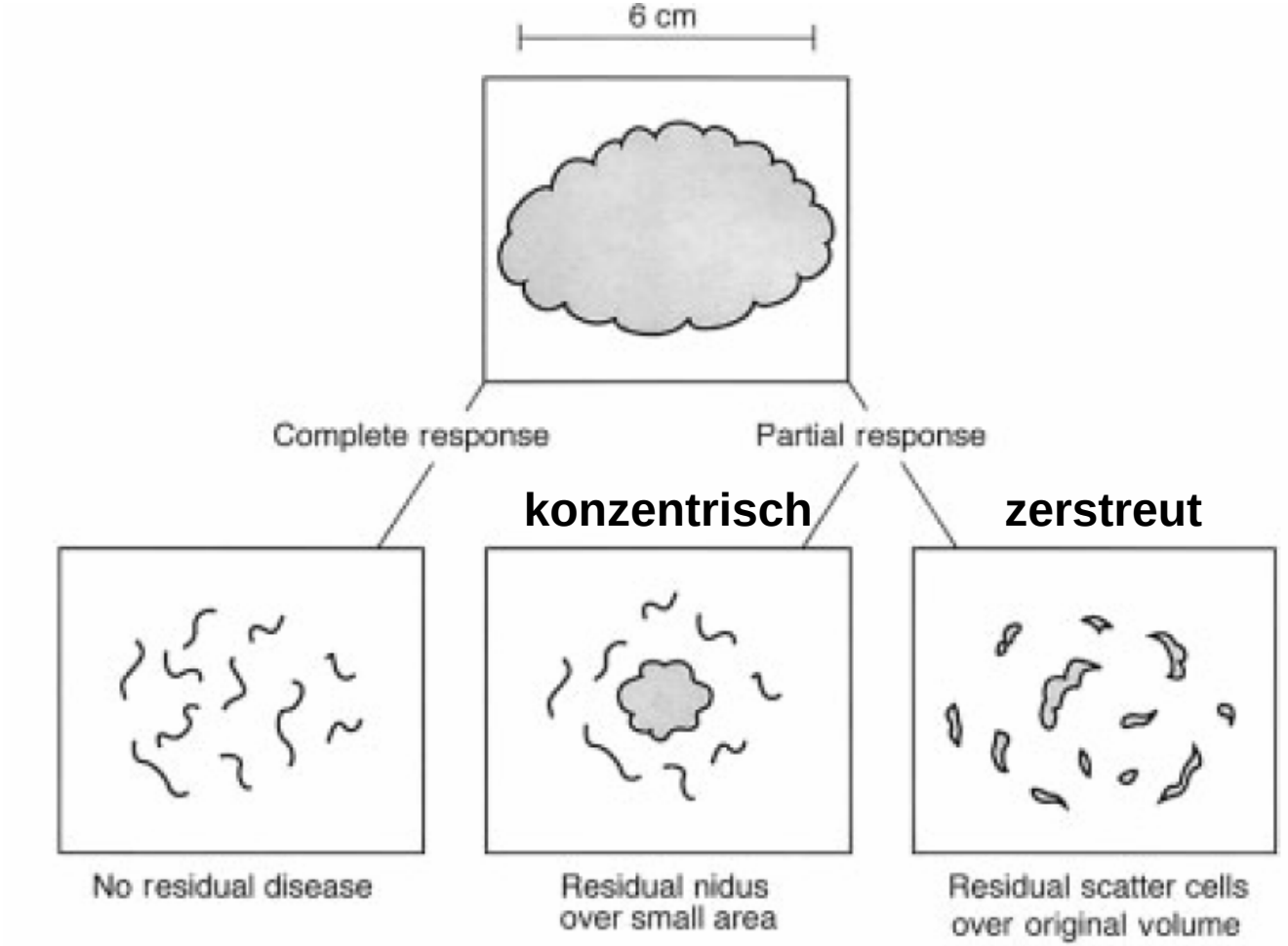
Gefahren der Chirurgie

Erhöhtes Lokalrezidivrisiko nach Brusterhaltender Chirurgie?

was a trend toward a higher rate of IBTR with preoperative chemotherapy, this difference was not statistically significant ($P = .12$): There were 34 (7.6%) IBTRs among 448 patients

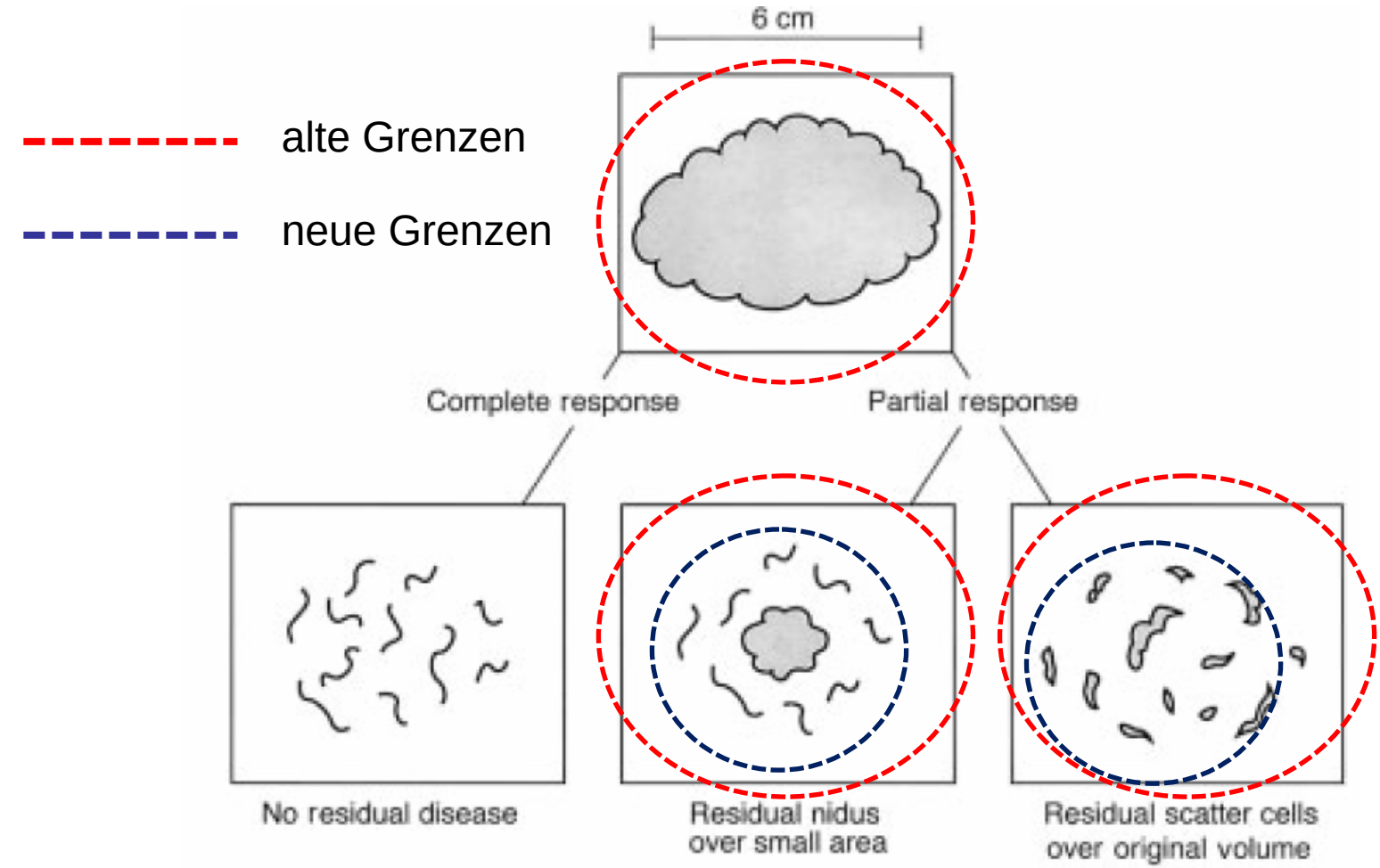
Wolmark, *JNCI* 2007

Problem nach Tumorreduktion



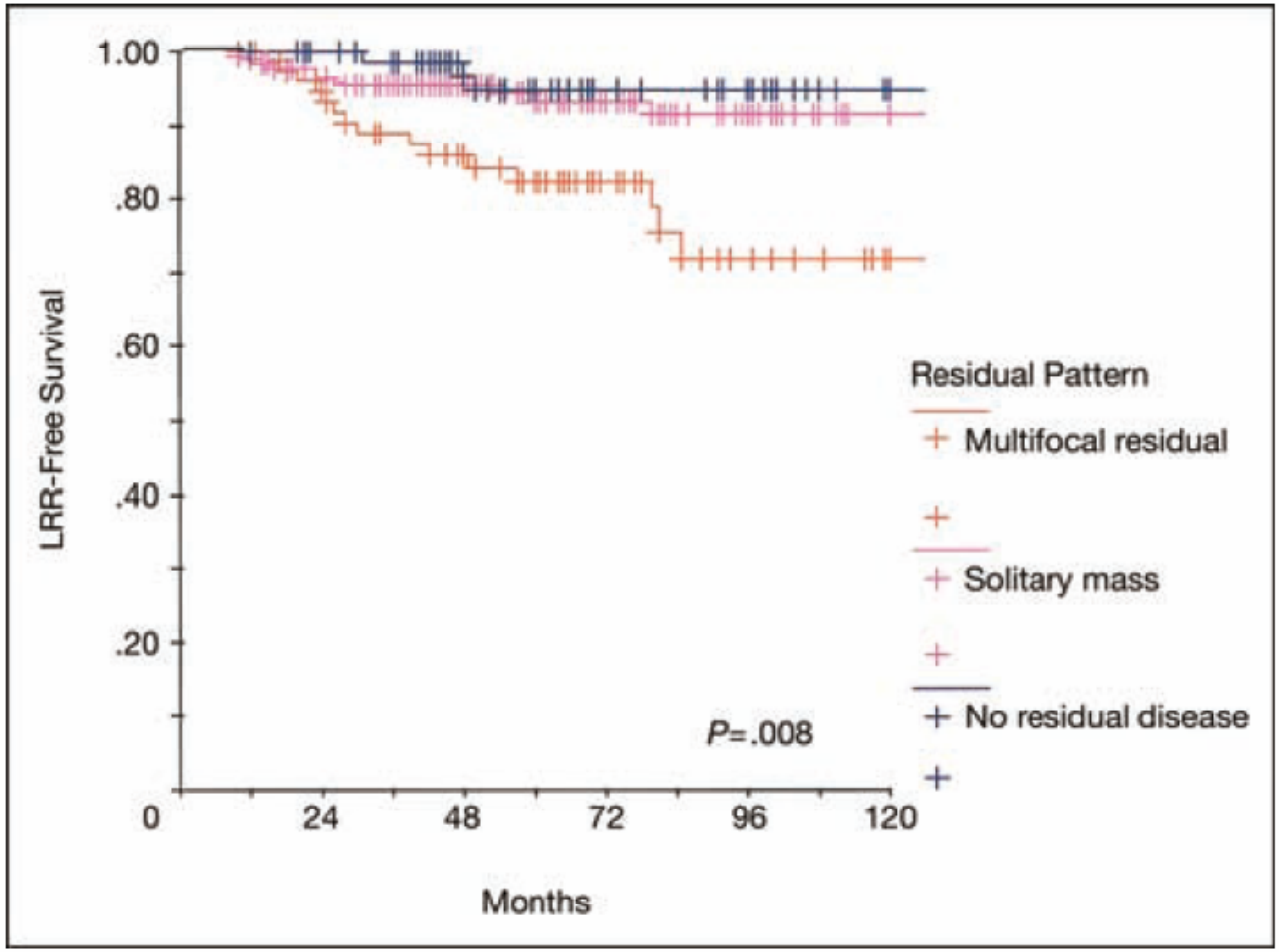
Buchholz, *Cancer* 2003

Problem nach Tumorreduktion



Buchholz, *Cancer* 2003

LRR nach Art der Tumorreduktion



Chen, *JCO* 2004

Lokalrezidiv nCT vs adjuvant

Table 2. First reported sites of treatment failure

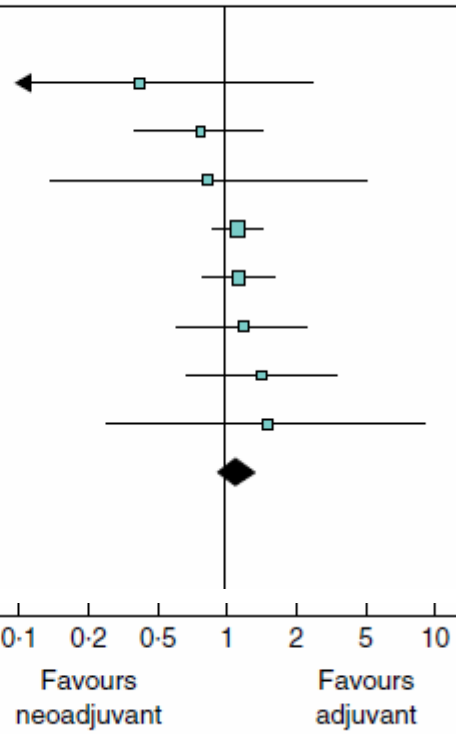
	Treatment group			
	Postoperative AC		Preoperative AC	
Type and site of failure	No.	%	No.	%
Clinically inoperable	0	0	1	0.1
Gross residual disease	11	1.5	8	1.1
IBTR only*	34	7.6	54	10.7

p=0.12

Wolmark, *JNCI* 2007

Lokalrezidiv nCT vs adjuvant

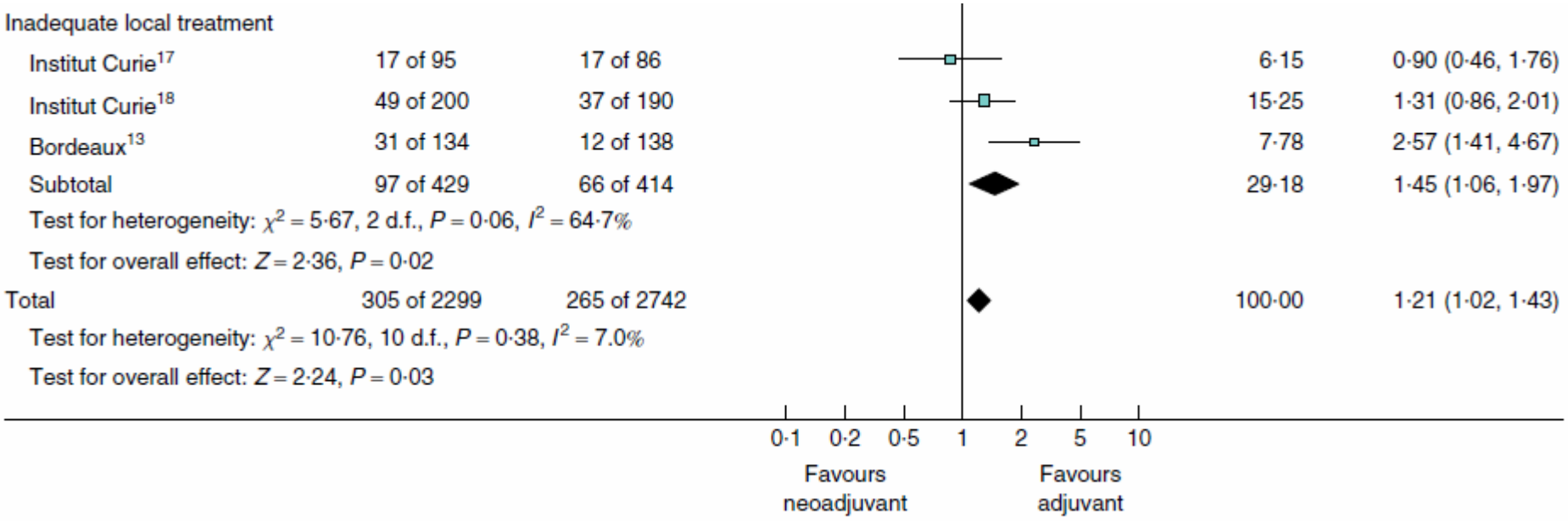
Study	Locoregional recurrence rate: Neoadjuvant	Locoregional recurrence rate: Adjuvant	Weight (%)	Hazard ratio
Optimal local treatment				
Lithuania[20]	1 of 50	3 of 50	0·72	0·38 (0·05, 2·69)
ECTO[14]	8 of 438	22 of 875	5·43	0·75 (0·37, 1·53)
Japan[19]	2 of 20	3 of 25	0·90	0·83 (0·14, 4·76)
NSABP[22]	108 of 742	96 of 751	36·90	1·15 (0·87, 1·51)
EORTC[16]	49 of 350	44 of 348	16·77	1·16 (0·77, 1·74)
London[21]	24 of 100	20 of 110	5·19	1·21 (0·58, 2·52)
Royal Marsden[23]	13 of 144	9 of 142	4·01	1·50 (0·65, 3·45)
USA[25]	3 of 26	2 of 27	0·90	1·58 (0·27, 9·11)
Subtotal	208 of 1870	199 of 2328	70·82	1·12 (0·92, 1·37)
Test for heterogeneity: $\chi^2 = 3{\cdot}22$, 7 d.f., $P = 0{\cdot}86$, $I^2 = 0\%$				
Test for overall effect: $Z = 1{\cdot}15$, $P = 0{\cdot}25$				



Miejog, *Br J Surg* 2007

Lokalrezidiv nCT vs adjuvant

Inadequate Lokaltherapie (zB nur RT oder BCT ohne RT)



Miejog, *Br J Surg* 2007

geplante BCT versus MX-BCT

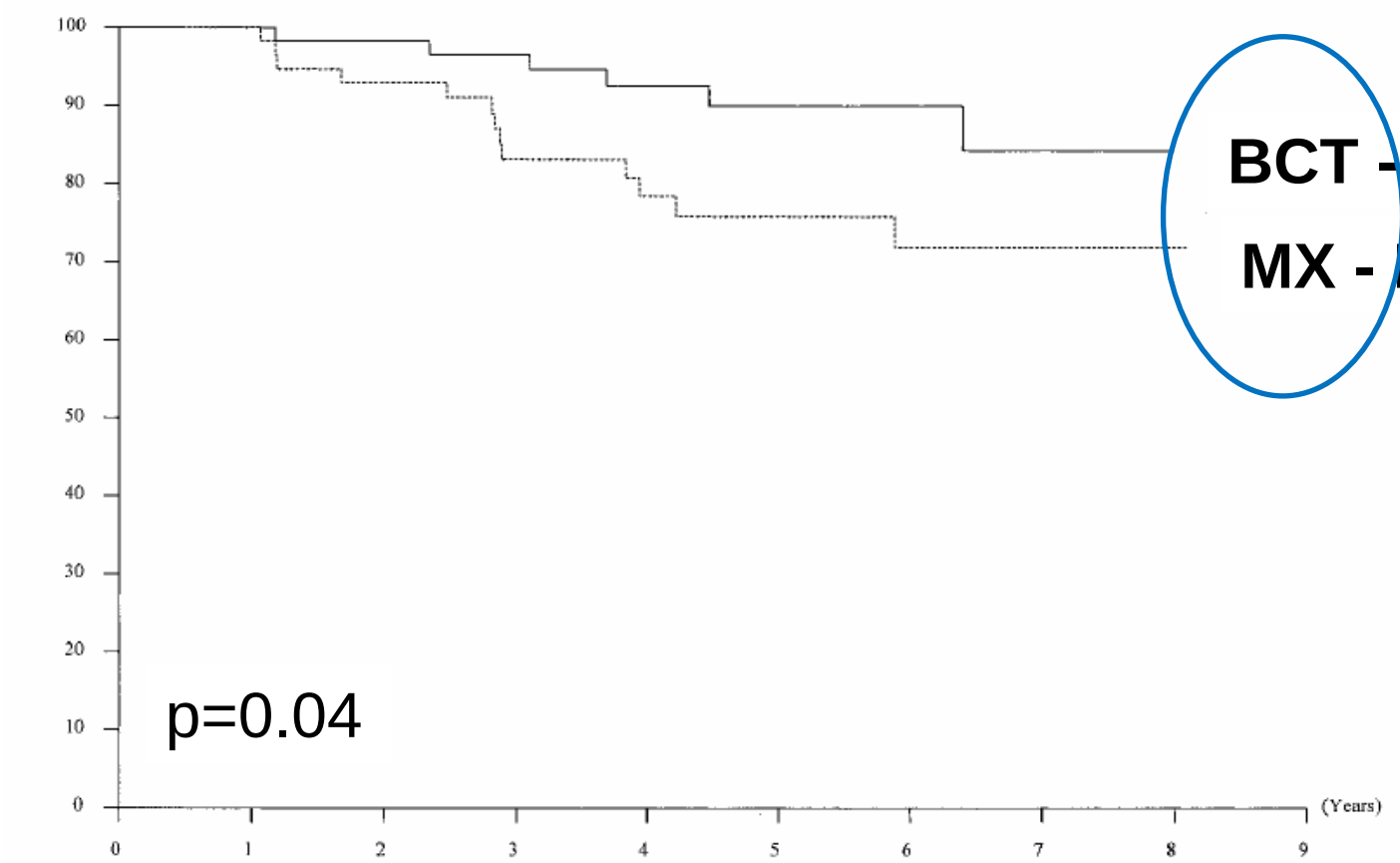
Clinical factor	Treatment group: Postoperative AC, % of patients with IBTR	Treatment group: Preoperative AC, % of patients with IBTR
Procedure after preoperative chemotherapy		
Lumpectomy vs. planned mastectomy	**MX - BCT**	15.9
Lumpectomy as planned	**BCT - BCT**	9.9

p=0.04

Wolmark, *JNCI* 2007

MX-BCT vs BCT-BCT

Gesamtüberleben



van der Hage, *JCO* 2001

BCT – BCT vs MX -BCT

p=0.02

Fitzal, BCRT 2010 accepted

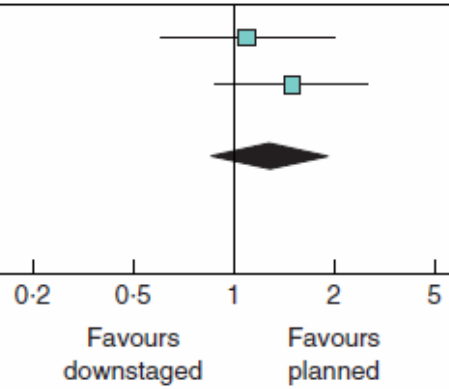
Metanalyse

BCT – BCT vs MX - BCT

Study	Locoregional recurrence rate: Downstaged BCS	Locoregional recurrence rate: Preplanned BCS	Relative risk (fixed)	Weight (%)	Relative risk (fixed)
EORTC[16]	13 of 60	12 of 60		50·43	1·08 (0·54, 2·18)
NSABP[22]	11 of 69	43 of 434		49·57	1·61 (0·87, 2·97)
Total	24 of 129	55 of 494		100·00	1·34 (0·85, 2·13)

Test for heterogeneity: $\chi^2 = 0{\cdot}70$, 1 d.f., $P = 0{\cdot}40$, $I^2 = 0\%$

Test for overall effect: $Z = 1{\cdot}26$, $P = 0{\cdot}21$



P=0.21

Miejog, *Br J Surg* 2007

Geplante MX versus BCT

Unterschiedliche Tumorbiologie als Ausgangswert

Characteristic	BCT ⇒ BCT No.	BCT ⇒ BCT %	MRM ⇒ BCT No.	MRM ⇒ BCT %
Total patients, N = 120	63		57	
Deaths	6	9.5	13	23
Age				
≤ 50 years	31	49	35	61
> 50 years	32	51	22	39
Clinical nodal status				
Negative	29	46	20	35
Positive	34	54	37	65
Clinical tumor size				
≤ 2 cm	49	78	44	77
> 2 cm	14	22	13	23
Pathologic nodal status				
Negative	32	51	36	63
Positive	31	49	21	37
Pathologic tumor size*				
≤ 2 cm	49	79	41	75
> 2 cm	13	21	14	25

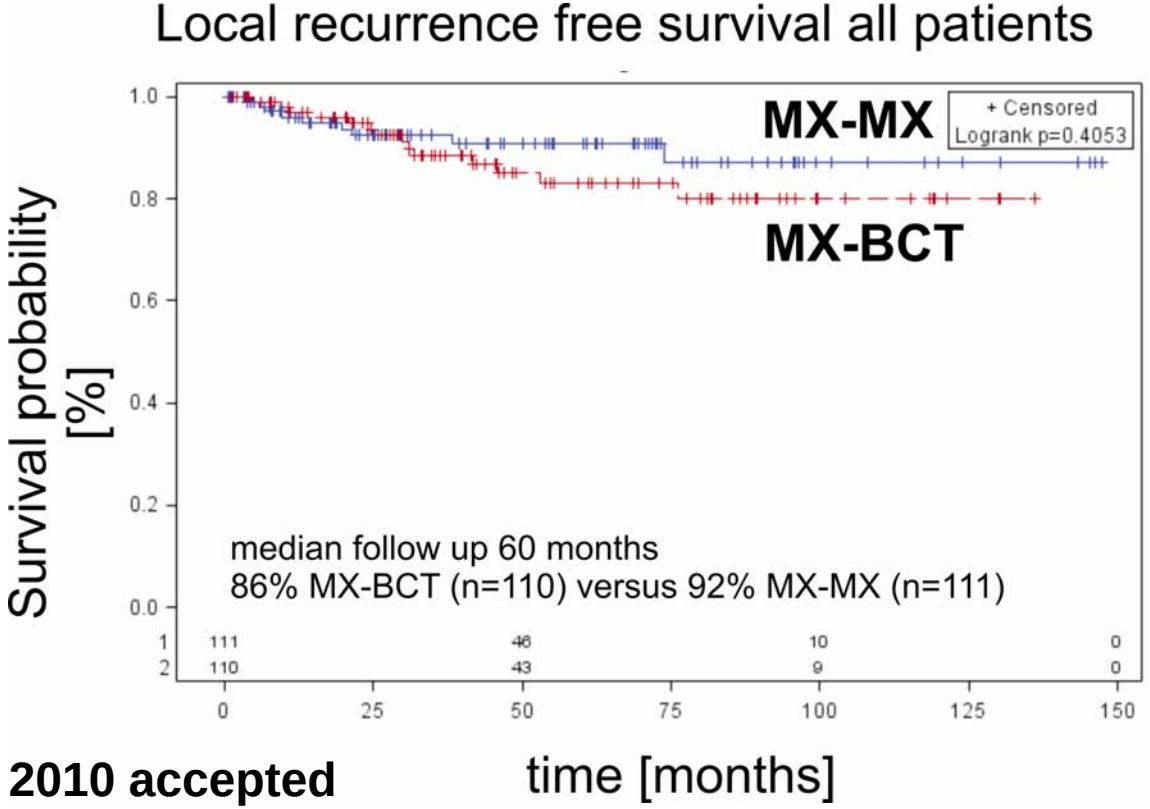
Age

Lymph node

van der Hage, *JCO* 2001

MX-BCT versus MX-MX

- Gleiche Ausgangssituation
- Unterschiedliches Ansprechen auf Chemotherapie

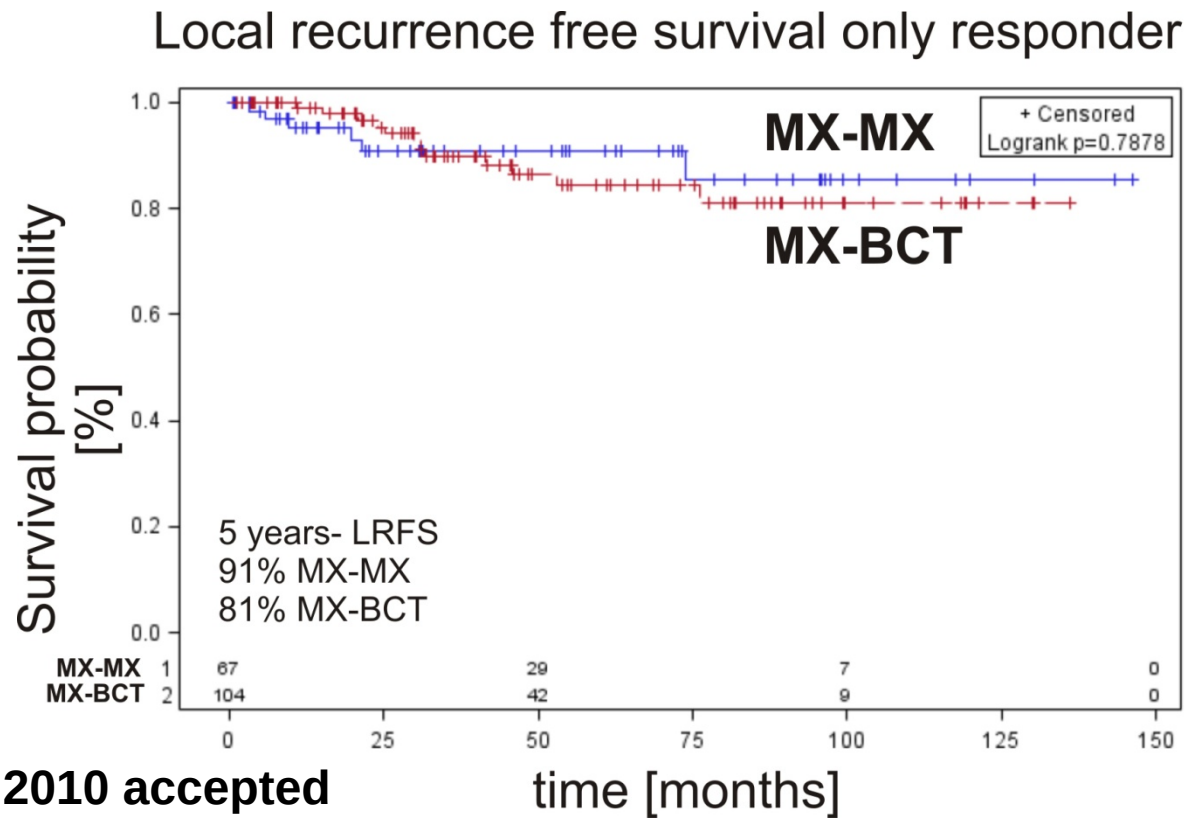


p=0.40

Fitzal, BCRT 2010 accepted

MX-MX vs MX-BCT nur responders (pPR, pCR)

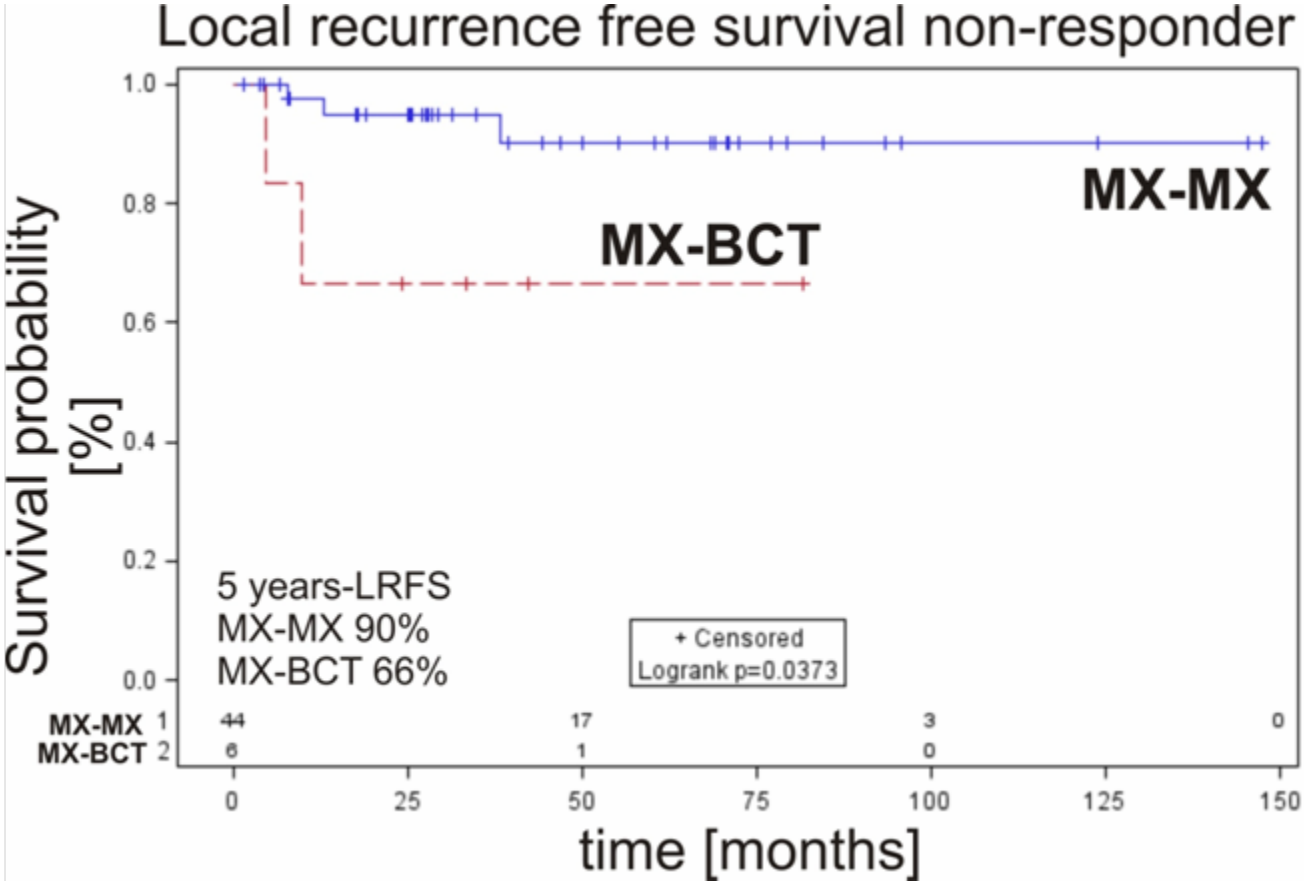
- Gleiche Ausgangssituation
- Gleiches Ansprechen auf Chemotherapie



p=0.78

Fitzal, BCRT 2010 accepted

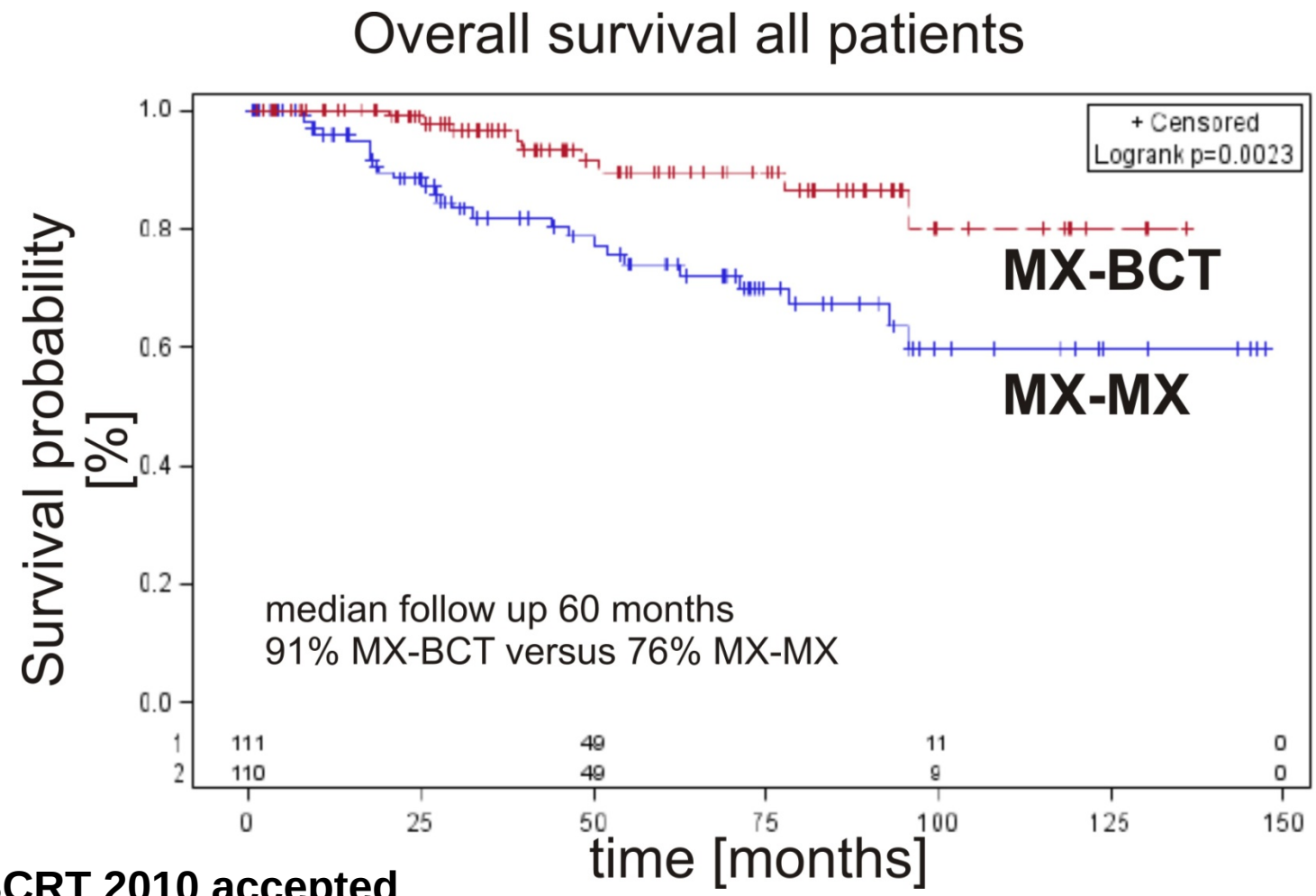
MX-MX vs MX-BCT non-responders (pNC, pPD)



p=0.03

Fitzal, BCRT 2010 accepted

MX-BCT versus MX-MX



Fitzal, BCRT 2010 accepted

Zusammenfassung

- **nach Ansprechen auf nCT**: BCT ist sicher
- **neue Grenzen:** onkologisch sicher
- **MR:** zur besseren Planung vor und nach nCT
- **Multizentrische Karzinome:** sollten primär ablationiert werden
  - *außer eine pCR ist mit hoher Wahrscheinlichkeit zu erzielen (aber auch dann Ablatio notwendig)*
- **kein Ansprechen auf nCT:** BCT ist onkologisch schlechter als MX