

**Multiple margin positivity
in frozen section
as a trigger factor
to local failure of breast cancer**

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Introduction

- **BCS + RTx**
: new standard treatment method
for early breast cancer
- **Major risk factor of local recurrence**
: extent of **surgical margin** positivity

Leborgne F, et al. *Int J Radiat Oncol Biol Phys* 1995;31:765-775.
Horiguchi J, et al. *Oncol Rep* 1999; 6:135-138.

Introduction

- **Multiple/extensive margin positive**
(\geq twice times or 2 different sites)
: may trigger **local recurrence** of cancer

Wazer DE, et al. Int J Radiat Oncol Biol Phys 1998;40:851-858.

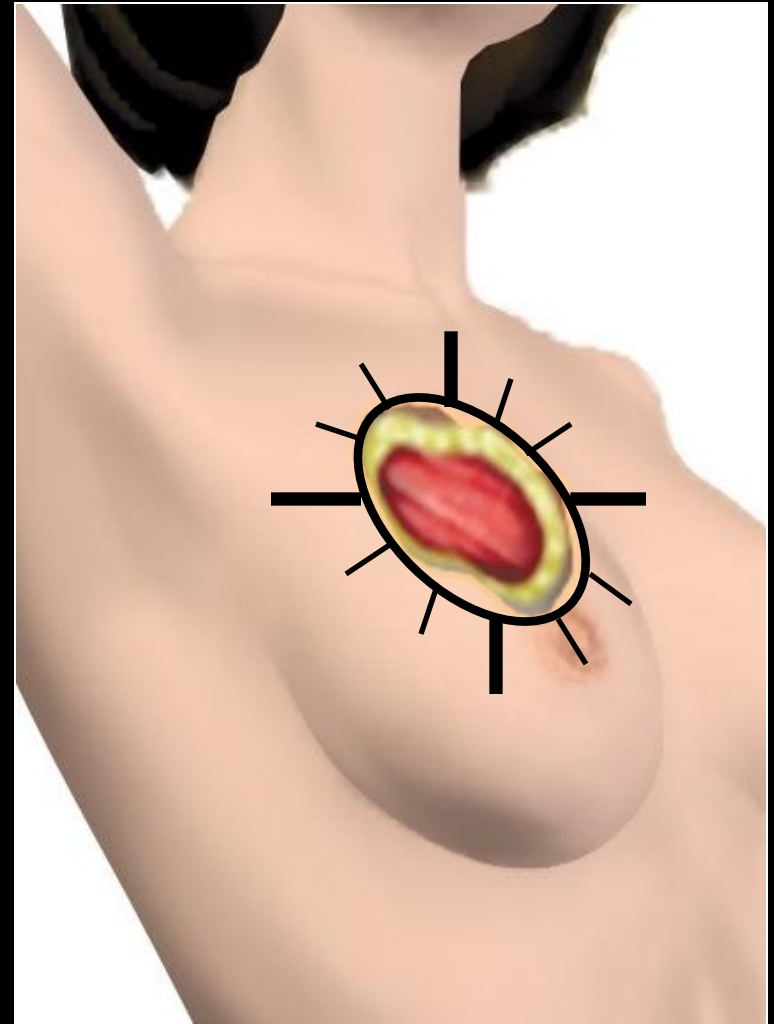
- To evaluate the relationship
local recur. & multiple margin positivity

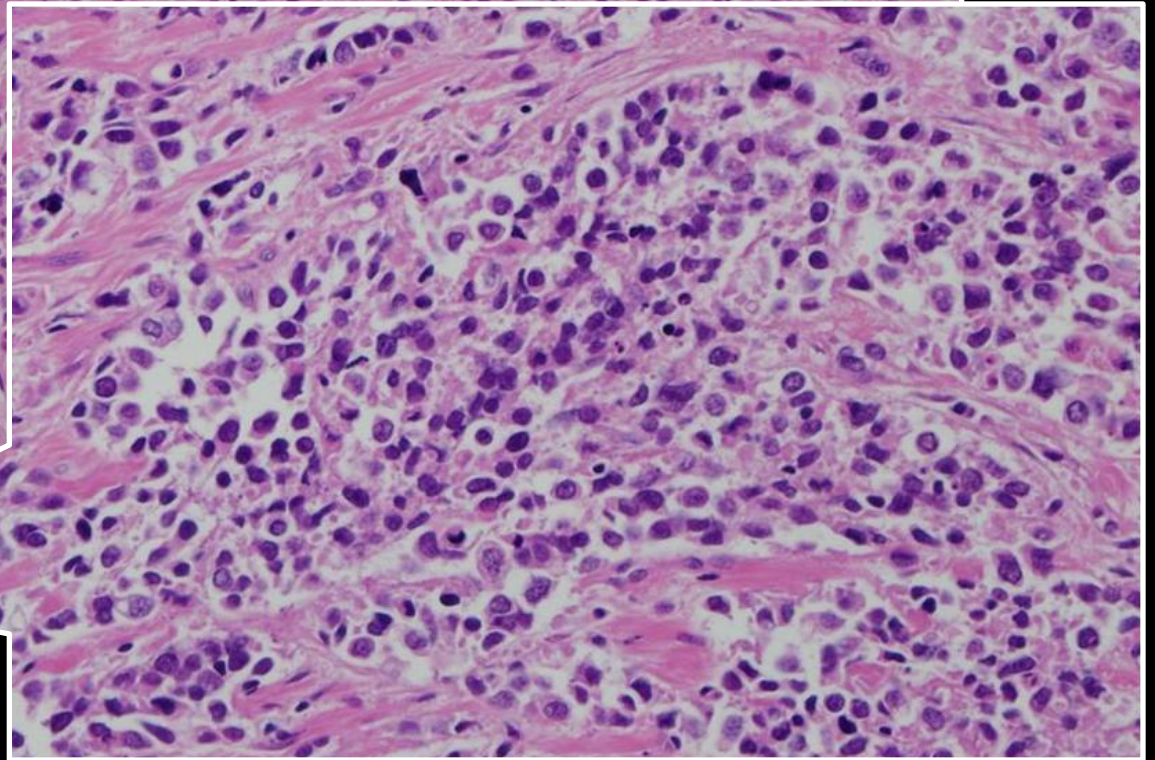
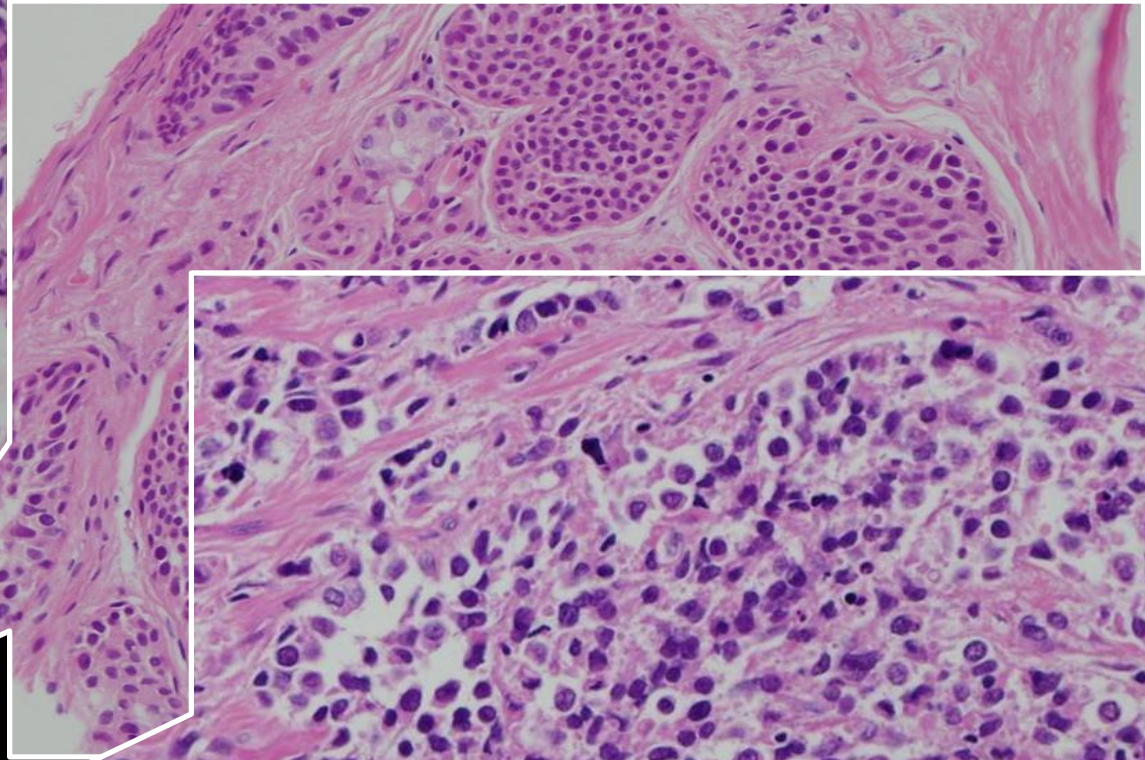
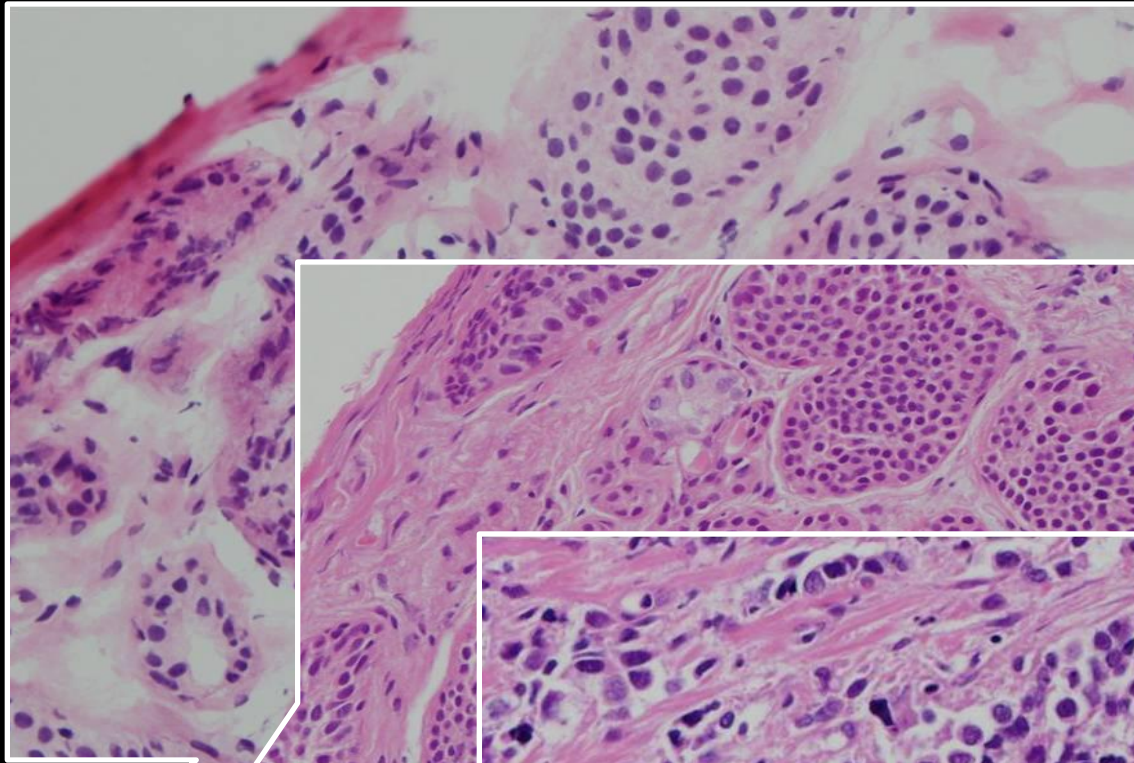
Materials

- **Period** : Jan, 1999 – Dec, 2003
- **Patients** : **410 patients**
 - early breast cancer
 - breast conserving surgery
- **10-year disease free survival (DFS)**

Intra-operative frozen section

- Total circumference
- Further margin
- Remnant breast tissue



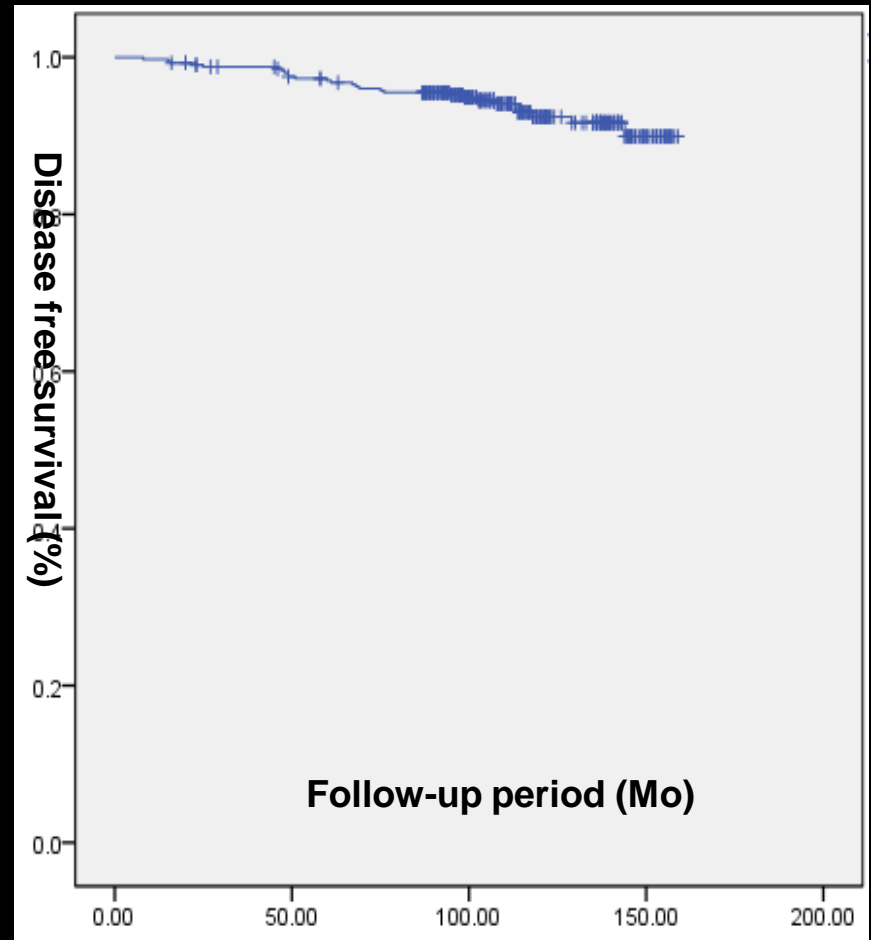


Statistical method

- **Statistics (SPSS 16.0v)**
 - : **Kaplan-meire survival analysis**
 - Extend of frozen margin status
 - 10-yr disease free survival (DFS)

Results

10-yr DFS : 93.4%



Results

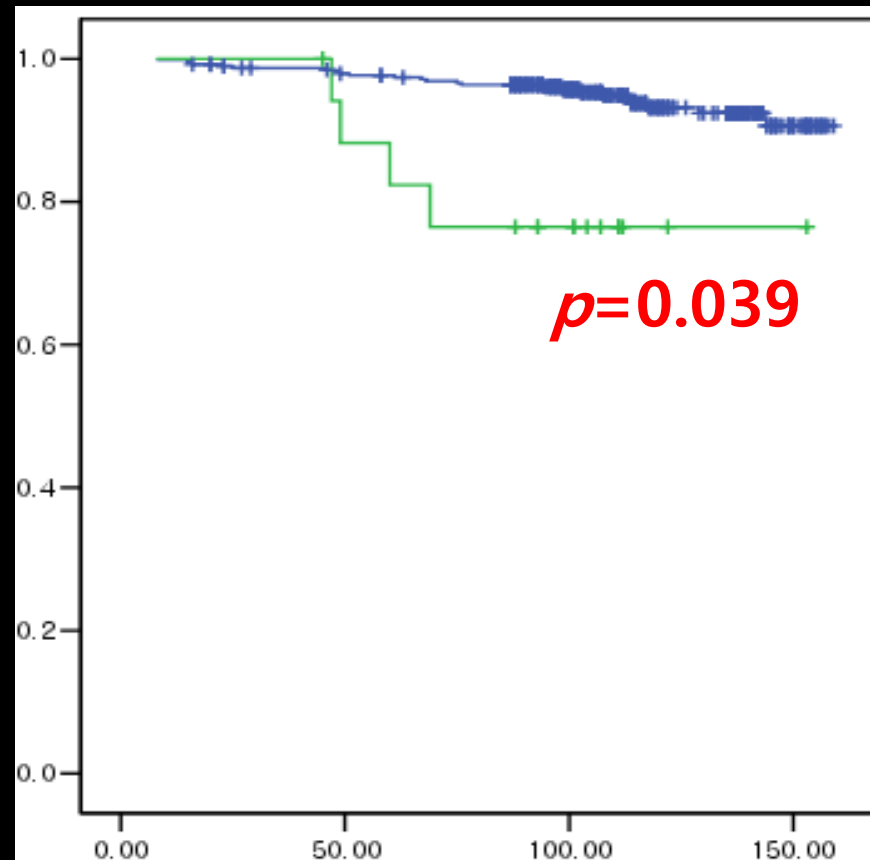
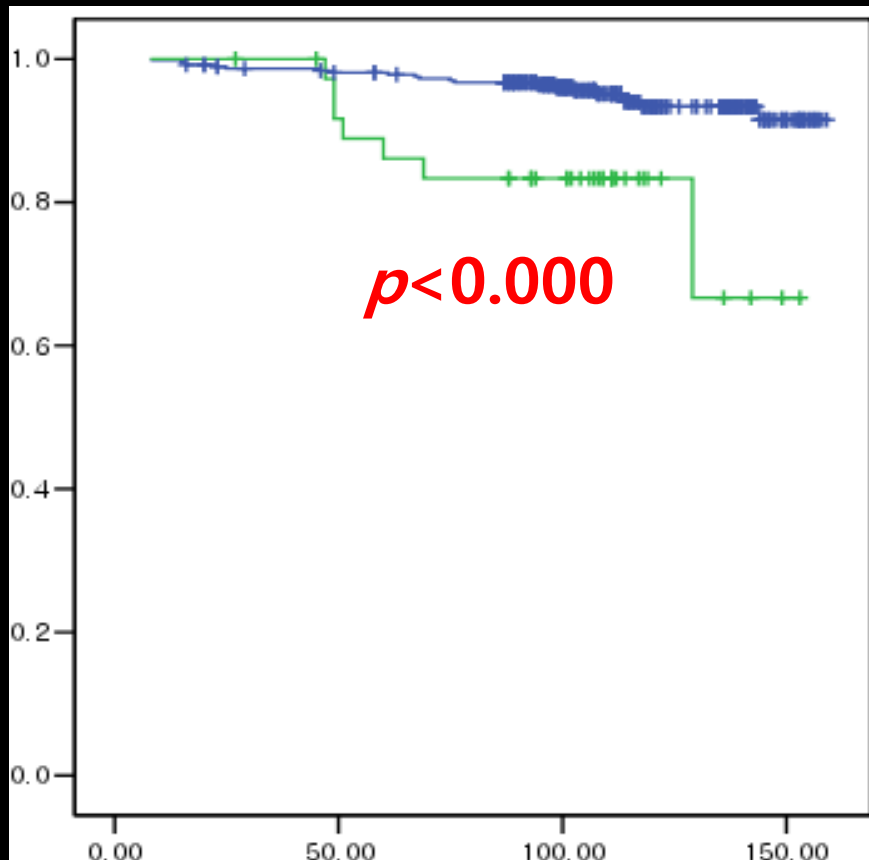
Variates		10-DFS (%)	<i>p</i>-value
Age (yrs)	≤ 50	92.86	0.964
	> 50	93.33	
Tumor size (cm)	≤2	93.05	0.467
	>2, ≤5	94.00	
	>5	100.00	
LN metastasis	Negative	93.17	0.823
	Positive	93.94	
Nuclear grade	1	96.97	0.813
	2	91.38	
	3	94.44	

Results

Variates		10-DFS(%)	<i>p</i>-value
Histologic grade	1	92.77	0.634
	2	95.61	
	3	94.00	
Estrogen receptor	Negative	94.20	0.572
	Positive	92.47	
Progesterone receptor	Negative	92.13	0.252
	Positive	94.85	
c-erbB2 gene	Negative	92.65	0.334
	Positive	95.88	
Triple negative	Negative	97.62	0.250
	Positive	93.63	

Results

Variates		10-DFS(%)	<i>p</i> -value
Initial frozen margin	Negative	94.5	0.052
	Positive	89.2	
No. of margin positive	< 2 times or sites	94.6	<0.000
	≥ 2 times or sites	81.6	
≥ 2 times or sites	Same site	93.9	0.039
	Different site	83.3	
Final margin	Negative	94.3	<0.000
	Positive	42.9	
Conversion results	Not conversed	94.3	<0.000
	Conversed	42.9	



Margin positive	10-yr DFS (%)
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< 2 times/sites	94.62
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≥ 2 times/sites	81.58
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≥ 2 times/sites	10-yr DFS (%)
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Same site	93.9
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Different site	83.3
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Results

Conversion cases		11/410 (2.7%)
No tumor	→ IDC	1
DCIS	→ IDC	1
ADH	→ IDC	1
Ductal hyperplasia	→ IDC	1
No tumor	→ DCIS	6
No tumor	→ ADH	1

Conclusion

- **Re-excision** would be necessary
 - **Margin positive** on final pathology
 - **Extended of positivity** (≥ 2 times/sites)
- Thus, multiple margin positive case also would be an indication of wider excision or nipple-sparing mastectomy, if necessary.

**THANK YOU
FOR YOUR ATTENTION**