

# Local-regional and distant recurrence rates after standard versus skin-sparing mastectomy

Min Yi<sup>1</sup>, Funda Meric-Bernstam<sup>1</sup>, Steven J Kronowitz<sup>2</sup>, Khazi M Nayeemuddin<sup>1</sup>, Barry W. Feig<sup>1</sup>, Rosa F. Hwang<sup>1</sup>,  
W. Fraser Symmans<sup>3</sup>, Merrick I. Ross<sup>1</sup>, Anthony Lucci<sup>1</sup>, Frederick C Ames<sup>1</sup>, Isabelle Bedrosian<sup>1</sup>, Eva Singletary<sup>1</sup>, Henry M. Kuerer<sup>1</sup>, Kelly K. Hunt<sup>1</sup>

<sup>1</sup>Departments of Surgical Oncology, <sup>2</sup>Plastic Surgery, and <sup>3</sup>Pathology, The University of Texas M. D. Anderson Cancer Center



## OBJECTIVES

To examine the incidence of local-regional recurrence, distant recurrence, disease-free survival and overall survival in breast cancer patients undergoing skin-sparing mastectomy (SSM) versus standard (non-skin-sparing) mastectomy at a comprehensive cancer center.

## PATIENT AND METHODS

- Patients with primary breast cancer, stage 0 to III, undergoing total mastectomy with or without axillary dissection at our center from January 2000 to December 2005.
- Exclusion criteria: patients with bilateral breast cancer, mastectomy for recurrent breast cancer, and patients with less than two-years of follow-up since surgery.
- Kaplan-Meier curves and log-rank test were used to evaluate the overall and disease-free survival in the two groups.

## RESULTS

**Table 1. Comparison of clinical and pathologic characteristics between patients with SSM vs. standard mastectomy**

Characteristics	Standard N=1095	SSM N=715	P
Median age (months)	56	49	<.0001
Clinical tumor stage			<.0001
0	135 (12.3)	235 (32.9)	
I	299 (27.3)	282 (39.4)	
II	429 (39.2)	177 (24.8)	
III	232 (21.2)	21 (2.9)	
Positive Lymph Nodes			<0.0001
No	710 (64.8)	589 (82.4)	
Yes	385 (35.2)	126 (17.6)	

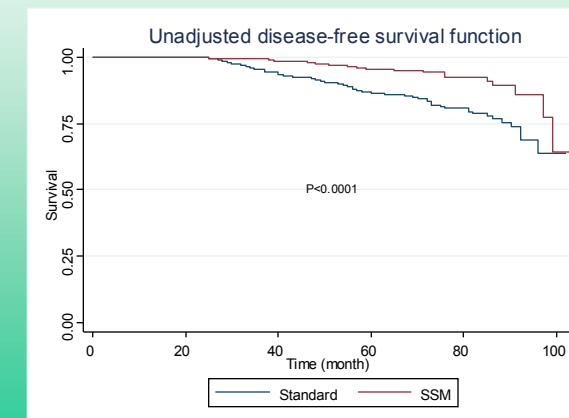
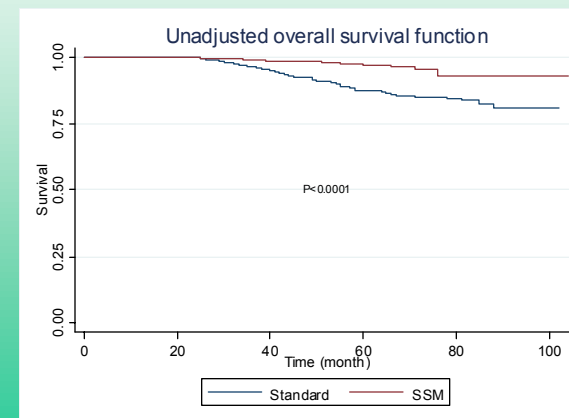
## RESULTS

**Table 2. Follow-up and recurrence information for SSM vs. standard mastectomy**

Characteristics	Standard	SSM	P
Median follow-up time (months)	50	52	0.07
Local recurrence			<.0001
No	1072 (97.9)	711 (99.4)	
Yes	23 (2.1)	4 (0.6)	
Regional recurrence			0.27
No	1070 (97.7)	704 (98.5)	
Yes	25 (2.3)	11 (1.5)	
Systemic recurrence			<0.0001
No	969 (88.5)	685 (95.8)	
Yes	126 (11.5)	30 (4.2)	

**Table 3. Stratified log-rank test for equality of survivor functions**

Stratify by stage	P value	
	Overall survival	Disease-free survival
Stage 0	0.25	0.63
Stage I	0.14	0.44
Stage II	0.001	0.02
Stage III	0.56	0.31
Total	0.0005	0.09



## RESULTS

- Of a total of 1810 patients, 715 (39.5%) underwent SSM and 1095 (60.5%) had a standard mastectomy.
- Patients who underwent standard mastectomy were older (56.6 vs. 49.3, p<0.0001) and had more advanced disease (stage II or higher: 60.4% vs. 27.7%, p<0.0001).
- Significantly more patients in the standard mastectomy group received radiation therapy (p<0.0001).
- Significantly more patients in the standard mastectomy had positive lymph nodes and lymphovascular invasion.
- At a median follow-up of 51 months (range 24-104), 171 patients (9.5%) had local-regional or distant recurrence.
- Overall, the local and distant recurrence rates in the standard mastectomy group were higher than those rates in the SSM group. After adjusting for clinical tumor stage, there were no differences in local and distant recurrence rates between the two groups.
- After stratifying by the clinical tumor stage, we did not observe any difference in disease-free survival between the two groups (P=0.09).

## CONCLUSIONS

- SSM appears to be a safe and effective surgical treatment option for appropriately selected patients with carcinoma of the breast.

## REFERENCES

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2. Meretoja TJ, von Smitten KA, Leidenius MH, et al: Local recurrence of stage 1 and 2 breast cancer after skin-sparing mastectomy and immediate breast reconstruction in a 15-year series. *Eur J Surg Oncol* 33:1142-5, 2007