

MALAT1 promotes relapse BC patients with postoperative fever

Supplementary Data

Postoperative fever and the short-term recurrence of breast cancer patients. All the enrolled patients completed the follow-up, with a median follow-up of 23 months (range 3-36 months). During the follow-up period, 11 relapse events were observed in 258 breast cancer patients, including 1 case with supra-clavicular lymph node metastasis, 2 cases with bone metastasis, 1 case with liver metastasis, 3 cases with pulmonary pleural metastasis, and 4 cases with multiple organ metastasis. Before the end of follow-up, 3 patients died due to relapse events. When compared with patients without fever after surgery (Non-fever group), those who had postoperative fever (Fever group) experienced more relapse events. Relapse-free survival of the two groups was 97.5% to 90.2% (Figure S1A), respectively. In the univariate survival analysis, we found significantly different PFS between the two groups (Log-rank test, $P = 0.0149$, Figure S1B). In the Cox proportional hazards regression analysis, we found that tumor size ($P = 0.015$; RR = 4.42; 95% CI 1.34-14.58) and fever ($P = 0.043$; RR = 3.43; 95% CI 1.04-11.31) were independent prognostic factors for PFS (Table S3).

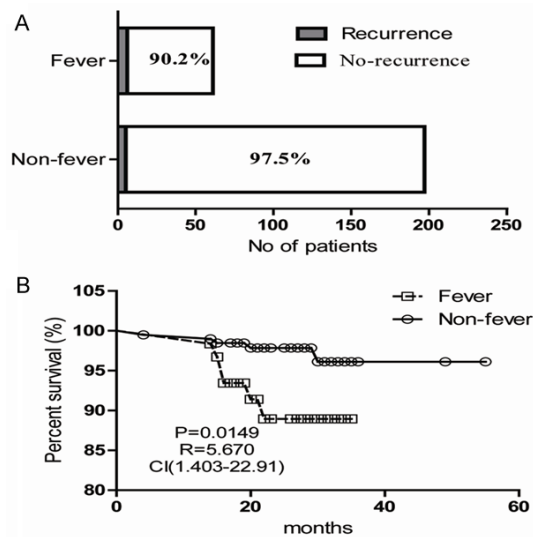


Figure S1. Postoperative fever may be an indicator of the short-term recurrence of breast cancer patients. A. Relapse-free survival of the fever group and non-fever group was 97.5% and 90.2%, respectively. B. Kaplan-Meier curve analysis indicated that patients with postoperative fever had poor prognosis compared with patients without postoperative fever (Log-rank test $P = 0.0149$).

Table S1. The nucleotide sequences of the targeting MALAT1 and Negative control shScramble

Malat1 siRNA-1	Sense	CACAGGGAAAGCGAGTGGTTGGTAA
	Antisense	TTACCAACCACTCGCTTTCCTGTG
Malat1 siRNA-2	Sense	GAGGUGUAAAGGGAUUUUAUTT
	Antisense	AUAAAUCCCUUUACACCUCTT
Malat1 siRNA-3	Sense	GGAAGATAGAAACAAGATATATCTTGTTCCTATCTCC
	Antisense	GGAAGATAGAAACAAGATATATCTTGTTCCTATCTCC
NC shScramble	Sense	UUCUCCGAACGUGUCACGUTT
	Antisense	ACGUGACACGUUCGGAGATT

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Table S2. The primers for MMP3 and vimentin

Gene	Foward primer (5'→3')	Reverse primer (5'→3')
MMP9	CAGCCCCTGCTCCTGGCTCTCCTG	ACTCGTCGTCGTCGAAATGGGCAT
Vimentin	GACAATGCGTCTCTGGCAGTCTT	TCCTCCGCCTCCTGCAGGTTCTT
β-actin	TCATGAAGTGTGACGTGGACATC	CAGGAGGAGCAATGATCTTGATCT

Table S3. Multivariate Cox regression analysis of prognostic factors for DFS in 258 primary breast cancer patients

Variable	RR	95% CI of RR	P value
Age (≤50 vs. >50)	0.567	0.157~2.055	0.388
Tumor-size (≥5 cm vs. <5 cm)	4.420	1.340~14.577	0.015
Lymph node status (positive vs. Negative)	2.197	0.511~9.441	0.290
ER (≥1% vs. <1%)	0.394	0.040~3.841	0.423
PR (≥1% vs. <1%)	0.683	0.062~7.503	0.756
HER2 (positive vs. Negative)*	2.576	0.684~9.702	0.162
Ki-67 (<20% vs. ≥20%)	0.316	0.074~1.345	0.119
Fever (≥38 °C vs. <38 °C)	3.430	1.040~11.313	0.043

*HER2-positive cancers were defined by either strong membrane staining (3+) observed by IHC or amplification of HER2 confirmed by fluorescence in situ hybridization when immunohisto-chemistry detected moderate (2+) membrane staining.