

## **Supplementary materials**

### **Axillary lymph node dissection plus radiotherapy may be an optimal strategy for patients with occult breast cancer**

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### Supplementary Table 1

Univariate and multivariate analyses for BCSS and OS before PSM.

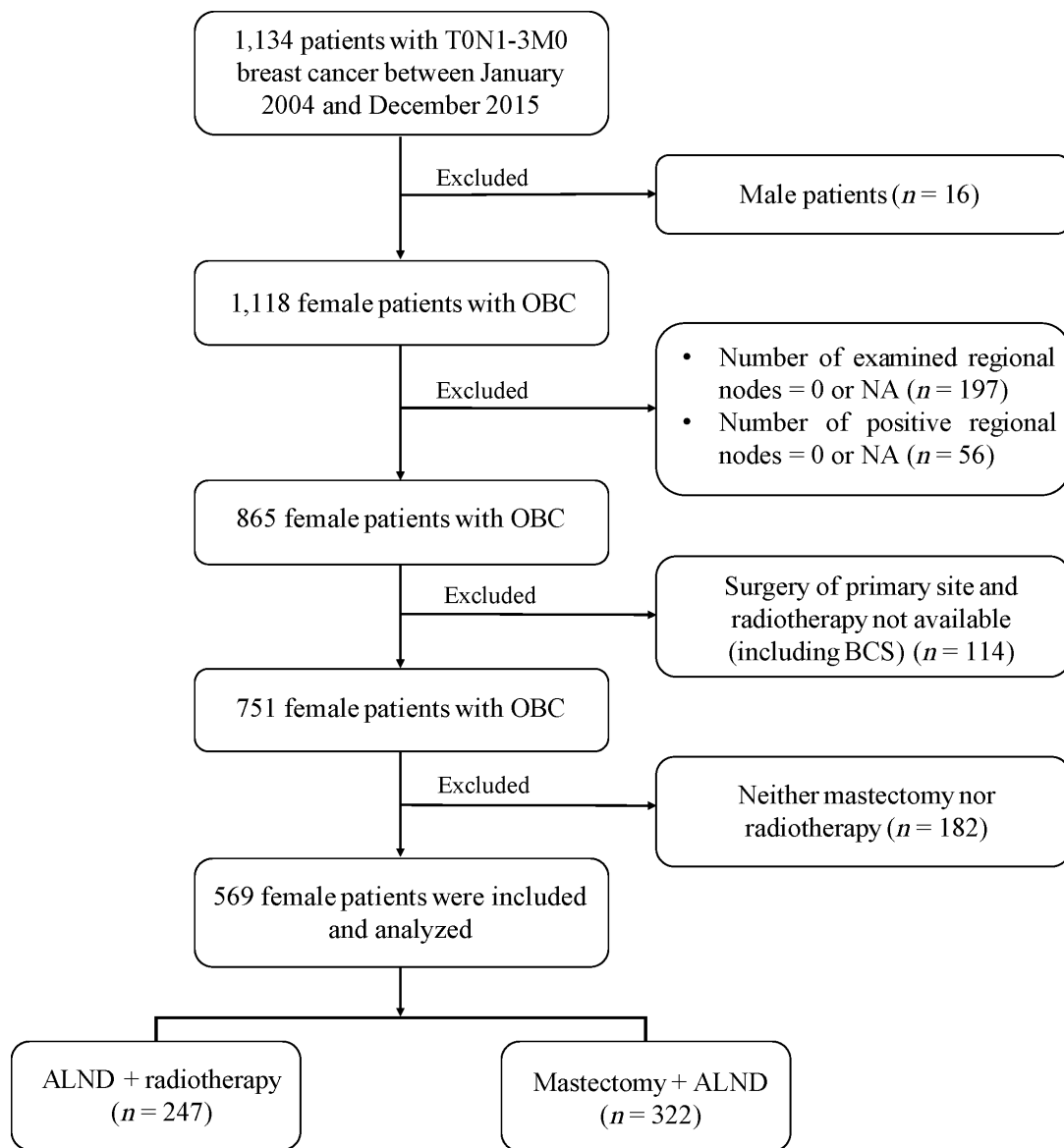
Characteristics	BCSS				OS			
	Univariate		Multivariate		Univariate		Multivariate	
	HR (95% CI)	<i>P</i>	HR (95% CI)	<i>P</i>	HR (95% CI)	<i>P</i>	HR (95% CI)	<i>P</i>
<b>Year of diagnosis</b>								
2004-2010	1		1		1		1	
2011-2015	0.800(0.348-1.843)	0.601	0.922(0.262-3.243)	0.899	0.579(0.330-1.014)	0.056	0.537(0.249-1.157)	0.113
<b>Age at diagnosis (year)</b>								
< 60	1		1		1		1	
≥ 60	1.326(0.694-2.533)	0.393	1.445(0.734-2.847)	0.287	1.581(1.082-2.310)	0.018	1.439(0.970-2.135)	0.071
<b>ER</b>								
Negative	1		1		1		1	
Positive	0.359(0.177-0.726)	0.004	0.394(0.153-1.012)	0.053	0.747(0.505-1.104)	0.143	0.641(0.374-1.097)	0.104
Unknown	0.479(0.143-1.599)	0.231	1.144(0.081-16.23)	0.921	0.650(0.319-1.324)	0.235	0.311(0.094-1.031)	0.056
<b>PR</b>								
Negative	1		1		1		1	
Positive	0.470(0.219-1.007)	0.052	0.813(0.297-2.226)	0.687	0.896(0.597-1.345)	0.597	1.187(0.679-2.074)	0.547

Unknown	0.490(0.148-1.625)	0.244	0.482(0.036-6.462)	0.582	0.903(0.495-1.647)	0.738	1.690(0.627-4.552)	0.299
<b>HER2</b>								
Negative	1		1		1		1	
Positive	0.307(0.039-2.427)	0.263	0.240(0.03-1.939)	0.181	0.260(0.061-1.109)	0.069	0.270(0.063-1.164)	0.079
Unknown	0.893(0.404-1.973)	0.780	0.748(0.225-2.489)	0.636	1.048(0.633-1.733)	0.856	0.711(0.358-1.412)	0.329
<b>Grade</b>								
I-II	1		1		1		1	
III-IV	1.280(0.280-5.854)	0.751	0.595(0.117-3.022)	0.531	0.982(0.402-2.400)	0.969	0.958(0.372-2.464)	0.928
Unknown	0.910(0.215-3.846)	0.898	0.509(0.109-2.369)	0.389	0.909(0.396-2.087)	0.822	0.964(0.403-2.308)	0.935
<b>Lymph node</b>								
N1	1		1		1		1	
N2	2.928(1.218-7.037)	0.016	2.919(1.165-7.310)	0.022	2.223(1.424-3.471)	< 0.001	2.226(1.400-3.540)	0.001
N3	4.976(2.278-10.868)	< 0.001	6.984(2.905-16.793)	< 0.001	2.003(1.268-3.166)	0.003	2.276(1.378-3.759)	0.001
<b>RNE</b>								
< 10	1		1		1		1	
≥ 10	0.978(0.491-1.947)	0.950	0.528(0.244-1.144)	0.106	1.096(0.729-1.648)	0.660	0.892(0.573-1.388)	0.612
<b>Chemotherapy</b>								
No	1		1		1		1	
Yes	1.017(0.446-2.317)	0.968	0.804(0.324-1.995)	0.639	0.503(0.337-0.752)	0.001	0.417(0.267-0.651)	< 0.001
<b>Local treatment</b>								
Mastectomy + ALND	1		1		1		1	

ALND +radiotherapy 0.841(0.603-1.173) 0.308 0.688(0.350-1.351) 0.277 0.750(0.512-1.099) 0.140 0.667(0.451-0.987) 0.043

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Abbreviations: ALND, axillary lymph node dissection; BCSS, breast cancer-specific survival; CI, confidence interval; ER, estrogen receptor; HER2, human epidermal growth factor receptor 2; HR, hazard ratio; OS, overall survival; PR, progesterone receptors; PSM, propensity score matching; RNE, regional lymph node examined.



**Supplementary Fig. 1.** The flow diagram of the patient selection process. ALND, axillary lymph node dissection; BCS, breast conserving surgery; NA, not available; OBC, occult breast cancer.

