

**Supplemental Table 1.** The OS of breast cancer patient stratificated by age

BMI category	Age-OS											
	<35				35-50				>50			
	total	event	$\chi^2$	<i>P</i>	total	event	$\chi^2$	<i>P</i>	total	event	$\chi^2$	<i>P</i>
<25.0	166	13	0.196	0.658	837	74	0.333	0.564	704	66	4.122	0.042
$\geq$ 25.0	61	6			535	52			875	111		
total	227	19			1372	126			1579	177		

**Supplemental Table 2.** The DFS of breast cancer patient stratificated by age

BMI category	Age-DFS											
	<35				35-50				>50			
	total	event	$\chi^2$	<i>P</i>	total	event	$\chi^2$	<i>P</i>	total	event	$\chi^2$	<i>P</i>
<25.0	166	22	0.710	0.400	837	106	0.437	0.509	704	78	1.158	0.282
$\geq$ 25.0	61	11			535	74			875	112		
total	227	33			1372	180			1579	190		

**Supplemental Table 3.** Univariate analysis of DFS and OS

	DFS		OS	
	HR(95.0% CI)	<i>P</i>	HR(95.0% CI)	<i>P</i>
Age		0.533		0.105
<35	1		1	
35-50	0.883 (0.609-1.279)		1.081 (0.667-1.751)	
>50	0.822 (0.568-1.189)		1.354 (0.843-2.173)	
Lymph node metastasis		0.000		0.000
No	1		1	
Yes	3.821 (3.061-4.770)		3.837 (2.989-4.925)	
BMI group		0.237		0.020
<25	1		1	
≥25	1.125 (0.925-1.368)		1.295 (1.041-1.612)	
Tumor size (cm)		0.000		0.125
0-2	1		1	
2-5	1.370 (1.102-1.703)		1.316 (1.032-1.677)	
>5	2.501 (1.657-3.775)		2.437 (1.545-3.845)	
Unknown	1.298 (0.928-1.815)		1.233 (0.845-1.800)	
Histological grade		0.000		0.004
1-2	1		1	
3	1.935 (1.485-2.521)		1.676 (1.239-2.268)	
Unknown	1.265 (1.016-1.575)		1.170 (0.918-1.492)	
ER status		0.000		0.000
Negative	1		1	
Positive	0.550 (0.451-0.672)		0.457 (0.367-0.569)	
PR status		0.000		0.000

Negative	1		1	
Positive	0.462 (0.380-0.562)		0.397 (0.318-0.495)	
HER-2 status		0.000		0.006
Negative	1		1	
Uncertain	1.230 (0.966-1.566)		1.339 (1.028-1.744)	
Positive	1.605 (1.268-2.031)		1.498 (1.144-1.961)	
Subtype		0.000		0.000
ER-PR-HER-2-	1		1	
ER/PR+ HER-2-	0.533 (0.394-0.721)		0.431 (0.311-0.597)	
HER-2 +	0.973 (0.706-1.340)		0.803 (0.568-1.137)	
Uncertain	0.798 (0.583-1.092)		0.733 (0.525-1.022)	
Ki-67		0.000		0.002
Low	1		1	
High	1.827 (1.335-2.499)		1.759 (1.238-2.500)	

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DFS, disease free survival; OS, overall survival.

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