

Table SI. Receiver operating characteristic curve analysis of *AP001429.1*.

Parameter	Value
AUC	0.684
SE.AUC	0.064
Lower limit	0.558
Upper limit	0.809
P-value	0.004
Cut-off point (Youden's method)	0.026
Sensitivity	0.727 (0.545-0.867)
Specificity	0.583 (0.408-0.745)
Positive predictive value	0.615 (0.440-0.796)
Negative predictive value	0.700 (0.511-0.830)
Positive likelihood ratio	1.745 (1.125-2.708)
Negative likelihood ratio	0.468 (0.251-0.871)

AUC, area under the curve; SE.AUC, standard error of AUC.

Table SII. Relative expression fold of *AP001429.1* in obese patients with BC compared with that in non-obese patients with BC in association with patient general characteristics.

Categories	Number of samples		Relative expression fold	Bonferroni P-value
	Obese BC	Non-obese BC		
Age of patients, years				
≤40	5	10	0.6	0.955
41-60	17	21	0.4	0.034 ^a
>60	14	2	0.7	>0.999
Marital status				
Single	5	2	1.1	>0.999
Married	29	29	0.4	0.006 ^a
Divorce	2	2	0.8	>0.999
Education level				
Illiterate	12	7	1.4	>0.999
School	13	12	0.2	<0.001 ^a
First and higher degree	11	14	0.6	0.266
Nationality				
Saudi	21	17	0.5	0.018 ^a
Non-Saudi	15	16	0.5	0.164
Age of first menstruation, years				
<12	1	3	1.0	>0.999
12-15	33	28	0.5	0.012 ^a
>15	2	2	0.4	>0.999
Menopausal status				
Postmenopausal	27	13	0.8	0.842
Premenopausal	9	20	0.3	0.002 ^a
Menopause age, years				
<48	3	0	-	-
48-55	21	11	0.7	0.958
>55	3	2	0.5	>0.999
Hormone replacement therapy				
Yes	2	0	-	-
No	34	33	0.5	0.009 ^a
Number of children				
≤3	18	21	0.6	0.328
4-6	12	6	0.2	0.026 ^a
>6	6	6	0.9	>0.999
Number of miscarriages				
None	13	14	0.6	0.748
1-2	11	13	0.4	0.026 ^a
≥3	6	2	0.4	>0.999
Age of first pregnancy, years				
≤20	10	12	0.5	0.268
21-30	18	16	0.4	0.030 ^a
>30	2	3	0.4	0.631
Breastfeeding				
Never	8	5	1.5	0.920
Yes	28	28	0.4	<0.001 ^a
Family history of BC				
Yes	7	6	0.8	0.816
No	29	27	0.4	0.004 ^a
Family history of other cancer				
Yes	7	6	0.5	0.562
No	29	27	0.5	0.010 ^a
Polycystic fibrosis status				
Yes	3	6	0.3	0.380
No	30	30	0.5	0.010 ^a

Table SII. Continued.

Categories	Number of samples		Relative expression fold	Bonferroni P-value
	Obese BC	Non-obese BC		
Diabetes mellitus status				
Yes	8	7	0.2	<0.001 ^a
No	28	26	0.6	0.075
Physical activities performance				
Yes	10	13	0.2	<0.001 ^a
No	26	20	0.7	0.344
Smoking status				
Yes	4	1	0.2	0.884
No	32	32	0.6	0.014 ^a
Omega-3 supplements				
Yes	9	4	0.3	0.142
No	27	29	0.5	0.024 ^a
Diet rich in fat				
Yes	11	6	0.7	0.924
No	25	27	0.5	0.062

^aP≤0.05. BC, breast cancer.

Table SIII. Relative expression fold of *AP001429.1* in obese patients with BC compared with that in non-obese patients with BC in association with patient clinicopathological characteristics.

Categories	Number of samples		Relative expression fold	Bonferroni P-value
	Obese BC	Non-obese BC		
Hormone receptor phenotype				
Luminal	24	25	0.6	0.120
HER2-enriched	5	5	0.8	>0.999
Triple negative	5	1	0.5	>0.999
ER status				
ER ⁺	24	24	0.6	0.081
ER ⁻	10	7	0.6	0.420
PR status				
PR ⁺	17	22	0.6	0.180
PR ⁻	17	9	0.5	0.236
HER2 status				
HER2 ⁺	10	14	0.9	>0.999
HER2 ⁻	24	17	0.4	0.022 ^a
Lymph node involvement				
Negative	18	12	0.6	0.220
Positive	8	7	0.4	0.136
E-cadherin				
Negative	1	2	0.1	<0.001 ^a
Positive	5	1	5.3	0.035 ^a
Size of tumor, cm				
<2	20	17	0.5	0.060
≥2	14	11	0.4	0.056
Tumor grade				
I	4	4	0.4	0.904
II	23	16	0.5	0.090
III	7	11	0.7	>0.999
BC histotype				
DCIS	30	23	0.6	0.082
LCIS	2	3	0.2	<0.001 ^a
Vascular invasion				
Negative	23	19	0.4	0.004 ^a
Positive	8	3	0.9	>0.999
Margin				
Negative	24	17	0.5	0.016 ^a
Positive	1	0	-	-

^aP≤0.05. BC, breast cancer; DCIS, ductal carcinoma *in situ*; ER, estrogen receptor; HER2, human epidermal growth factor receptor 2; LCIS, lobular carcinoma *in situ*; PR, progesterone receptor.