

**Supplementary Table 1.**

Demographic evaluation of clinical criteria, and  $\alpha 9$ -nAChR mRNA expression fold ratios of tumor vs normal paired samples.

Characteristic	Total No. of Patients	$\alpha 9$ -nAChR (N>T)			$\alpha 9$ -nAChR (T>N)		
		No.	mean fold & 95% CI	<i>P</i>	No.	mean fold & 95% CI	<i>P</i>
Age				.42			.36
< 50 y	18	6	3.4 (-1.6 to 8.3)		12	9.5 (4.7 to 14.3)	
≥ 50 y	32	11	5.9 (1.0 to 10.7)		21	9.4 (3.8 to 15)	
Size of tumor				.22			.07
T1	9	1	3.7		8	5.9 (1.1 to 10.7)	
T2	25	10	5.4 (2.9 to 7.9)		15	9.3 (2.7 to 15.9)	
T3	15	6	4.6 (2.1 to 9.1)		9	12.4 (-3.4 to 28.2)	
T4	1	0	ND		1	13.5,	
Nodal status				.51			.24
N0	30	10	5 (-1 to 11)		20	8.9 (3 to 14.8)	
N1	11	6	5.3 (0.6 to 10)		5	8.6 (1.7 to 15.5)	
N2	4	1	3.1		3	11.9 (-1.9 to 25.6)	
N3	5	0			5	11.2 (1.4 to 21)	
Stage				.63			.04*
I	15	6	6.5 (2 to 8.5)		9	1.2 (0.3 to 2)	
II	19	6	3.3 (-0.6-7.2)		13	8.7 (1.4 to 16)	
III	15	5	5.3 (-1.2 to 11.8)		10	17.4(2.2 to 32.6)	
IV	1	0			1	13.5	
ER status				.21			.05*
Negative	17	5	4.5 (1.6 to 7.4)		12	7.2 (1.1 to 13.3)	
Positive	33	12	5.4 (2.8 to 7.8)		21	10.2(3.1 to 17.3)	
PR status				.87			.83
Negative	26	6	4.5(0.2 to 8.8)		20	9.4 (0.5 to 18.3)	
Positive	24	11	5.3 (2.8 to 7.8)		13	9.5 (1.8 to 17.2)	
Her-2 status				.22			.06
Negative	31	14	5.1 (1.1 to 9.1)		17	6.7(1.4 to 12)	
Positive	19	3	4.3(2.6 to 6.7)		16	13.7(1.9 to 25.5)	

5-year survival				.13			.04*
Alive	46	16	5.3 (1.9 to 8.7)		30	8.8(-1.4 to 19)	
Dead	4	1	1.2		3	15.7 (9.5 to 22)	
Chemotherapy				.31			.44
No	15	10	5.5(1.7 to 9.3)		5	9.6 (0.8 to 18.4)	
Yes	35	7	4.3 (-0.3 to 8.9)		28	9.4 (2.1 to 16.7)	
Radiotherapy				.27			.31
No	34	12	5.1(-0.3 to 10.5)		22	9.7 (-1.5 to 20.9)	
Yes	16	5	4.8 (1.1 to 8.5)		11	8.9 (-1.4 to 19.2)	
Tamoxifen				.21			.05*
No	20	5	4.5 (1.6 to 7.4)		15	7.2 (1.1 to 13.3)	
Yes	30	12	5.4 (2.8 to 7.8)		18	10.2(3.1 to 17.3)	
Herceptin				.11			.29
No	42	16	5 (0.9 to 9.1)		26	9.4 (-1.4 to 20.2)	
Yes	8	1	4.9		7	8.2 (1.6 to 14.8)	

\* Fold ratios of  $\alpha 9$ -nAChR mRNA expression were determined in normal/tumor or tumor/normal paired samples. Data were analyzed using univariate analyses. A  $P$ -value  $< 0.05$  was considered as statistically significant. All  $P$ -values are two-sided.

§ Mean: average fold ratio of  $\alpha 9$ -nAChR mRNA expression in each group.