Table S1. Pathological and Molecular characteristic details of the 98 patient samples.

Characteristics	IMPC		IDC-NST		P-value
	n	**%**	**n**	**%**	
Average age (y)		47.5±11.73		50.6±11.36	0.891
Range of age		28-76		33-79	0.621
≤ 60	42	87.5	42	84	
> 60	6	12.5	8	16	
Gender		Female		Female	
Tumor size					0.909
T1	19	39.6	21	42	
T2	25	52.1	24	48	
T3	4	8.3	5	10	
Nodal status					**0.005**
N0	12	25	19	38	
N1	5	10.4	15	30	
N2	17	35.4	12	24	
N3	14	29.2	4	8	
Grade					0.667
G1	2	4.17	1	2	
G2	32	66.67	30	60	
G3	14	29.16	19	38	
ER status					0.903
Positive	35	72.91	37	74	
Negative	13	27.08	13	26	
PR status					0.966
Positive	29	60.42	30	60	
Negative	19	39.58	20	40	
Plakoglobin					**0.004**
Positive	34	70.8	21	42	
Negative	14	29.2	29	58	

Distant metastasis	14	29.2	6	12	**0.035**

Table S2. Correlation between Plakoglobin and PI3K/pAkt/BCL-2 pathway

| IMPC			
	Plakoglobin expression (Number of tissue samples)		***P*-value**
	Negative	**Positive**	
PI3K p85 expression			**<0.001**
Negative	12	0	
Positive	2	34	
p-AKT expression			**<0.001**
Negative	10	4	
Positive	4	30	
BCL-2 expression			**<0.001**
Negative	11	2	
Positive	3	32	

Figure S1:
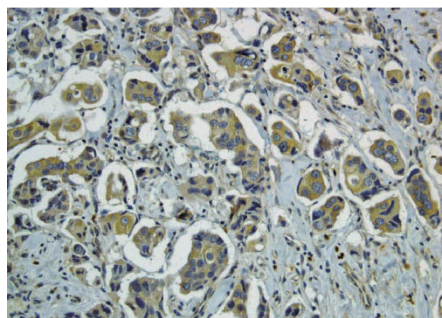
3 — Strongly positive membranous and cytoplasm staining in clusters of tumor cells
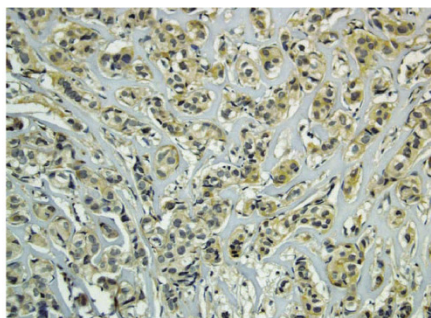
2 — Moderately to strongly positive staining in small clusters of tumor cells
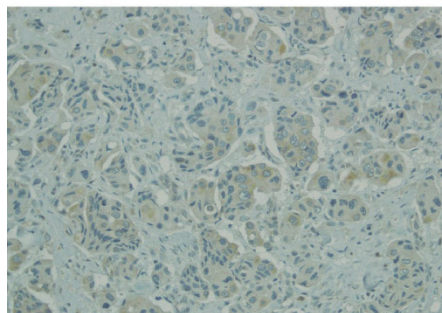
1 — Any degree of staining above background, but less than that in '2'
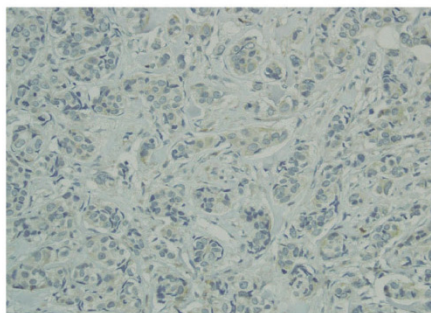
0 — No appreciable staining above background

Figure S1: Representative images of IHC staining of plakoglobin protein, showing 0 (absent), 1 (weak), 2 (moderate), or 3 (dense) plakoglobin staining intensity.