Patient study ID	DOB	Laterality	ER	PR	HER2 0-negative 1-positive	Ki-67 (%)	Pathology	Grade	T (p)	Size (cm)	N (clinical) 0= negative 1= positive
11580-0060	01/09/1968	Left	90	20	0	15	invasive ductal carcinoma	2	yT3	6	1
11580-0057	03/18/1966	left	95	50	0	10	invasive mammary carcinoma	1	T1c	1.2	0
11580-0066	4/11/1978	left	90	80	0	20	invasive ductal carcinoma	3	T1b	0.7	0
11580-0069	1/2/1970	Right	90	10	0	25	invasive mammary carcinoma	3	yT1a	0.2	0
11580-0071	3/10/1960	left	90	0	0	not reported	mucinous carcinoma	2	T1c	1.4	0
11580-0074	7/20/1974	Right	60	70	0	10	invasive ductal carcinoma	2	yT1a	0.12	1
11580-0079	11/19/1959	left	90	40	0	15	invasive lobular carcinoma	2	T1b	0.7	0
11580-0083	4/4/1950	Left	90	90	0	10	invasive ductal carcinoma	2	T1b	1	0
11580-0084	8/26/1978	Right	90	90	0	10	invasive ductal carcinoma	2	T1c	1.3	0
11580-0088	8/23/1943	Right	90	90	0	5	invasive lobular carcinoma	2	T1c	1.5	0
11580-0091	6/5/1969	Right	100	0	0	1-2	invasive ductal carcinoma	1	T1b	0.8	0
11580-0093	8/25/1961	Right	90	90	Not assessed	Not assessed	DCIS	2	Tis	1.8	Not assessed
11580-0101	8/10/1973	Left	90	90	1	25	invasive ductal carcinoma	2	T1c	1.5	1
11580-0114	12/30/1955	Right	90	90	0	15	invasive ductal carcinoma	2	T1a	0.2	
11580-0099	1/28/1971	Right	0	0	1	80	invasive ductal carcinoma	2	T2	3.1	1
11580-0080	7/15/1964	left	0	0	1	91	invasive ductal carcinoma	2	T1b	0.7	0
11580-0085	12/27/1949	Left	0	0	0	25	invasive ductal carcinoma	2	T1a	5	0
11580-0098	3/13/1950	Left	0	0	0	25	invasive ductal carcinoma	3	T3		1
11580 -043	7/18/1971	Right	0	0	0	60	invasive ductal carcinoma	3	T2	4.1	0
11580 -053	10/21/2002	Right	0	0	0	50	metaplastic carcinoma	2	T4a	11	0

Table S1. List of breast cancer patients' serum/PBMC was used in the current study