

Pt	Age	Diagnosis	Stage	Grade	Tumor Size (cm)	LN p/n	BI-RADS	Breast Density	Race	HR Status	ERBB2 Status	Previous Cancer	Neoadjuvant chemo	Chemo	Radiation	Recurrence	PFI	Survival since diagnosis	Vital Status	Tissue(s) per patient	NML in cancer cluster	Cancer in basal-enriched cluster	Cancer in luminal-like cluster
1	49	IDC	2a	3	1.7	1/25	5	1	W	+	-	Ovarian 32 mo prior		Yes	No			37	Alive NED	NI			
2	37	IDC	2a	2	0.8	1/14	5	2	W	+	+			Yes	No	No		50	Alive, Unknown Status	NI (fatty)			
3	44	IDC	2b	3	2.0	2/18	5	2	W	+	-	Cervical 25 mo prior		Yes	Yes	No		55	Alive NED	CA			*
4	81	IDC	2a	2	4.5	0/14	4	2	W	+	-			No	No	No		55	Alive NED	NI			
5	62	IDC	2b	3	4.0	2/11	4	2	W	-	+	Uterine 175 mo prior		No	No	Local	11	Expired w/ Breast CA	CA, NI (fatty)			*	
6	47	IDC	2c	3	7.0	19/36	4	0	W	-	-			Yes	Yes	Distant		21	Expired w/ Breast CA	CA			*
7	37	IDC		3	5.5	6/10	4		W	-	+		*	Yes	No	Distant	7	Expired w/ Breast CA	CA, NI	*			
8	56	IDC	2b	3	3.2	1/4	5	3	W	-	-			Yes	No	No		52	Alive NED	CA, NI			*
9	60	IDLC	2b	3	2.2	1/24	2	3	W	+	-			Yes	No	No		52	Alive NED	CA			*
10	82	IDC	2b	3	5.0	3/18	5	2	W	-	-			Yes	Yes	No		52	Alive NED	CA			*
11	52	DCIS		3	1.6	0/2	3	2	W	+				No	No	No		52	Alive NED	NI			
12	58	MET	2a	3	7.0	1/27	4	2	W	-	+			No	No	No		52	Alive NED	CA, NI		*	
13	36	IDC	2b	3	2.1, 1.5, 0.2	1/25	5	3	W	+	+			Yes	Yes	No		50	Alive NED	CA, NI	*		*
14	39	IDC	2a	3	0.8-5.1	2/19	5	1	W	+	-			Yes	No	Distant		52	Alive w/ Breast CA	CA, NI		*	
15	56	ILC	3c	2	10.0	16/28	4	2	W	+	-			Yes	Yes	Distant		52	Alive w/ Breast CA	NI (fatty)			*
16	50	IDC	3c	3	Multifocal	15/19	4	3	W	+	-	Breast 1 mo prior	*	Yes	Yes	No		53	Alive NED	CA, NI, NC (fatty)	*		*
17	71	IDC	2b	3	4.7	2/35	5	2	B	+	-			No	No	Distant	9	12	Expired w/ Breast CA	CA, NI (fatty)		*	
18	60	ILC	2c	2	7.0	17/21	0	1	W	+	-			Yes	Yes	No		47	Alive NED	CA, NI			*
19	76	IDC	1	2	0.8	0/5	4	2	W	+	-	Skin 273 mo prior		No	No	No		47	Alive NED	NI (fatty)	*		
20	64	IDC	2b	3	3.7	1/17	4	2	W	-	+			Yes	Yes	No		47	Alive NED	CA, NI			*
21	46	IDC			6.0	2/13	5	1	N	+	+			Yes	Yes	No		47	Alive NED	CA, NI (fatty)			*
22	35	IDC	2b	2	3.8, 1.7	3/35	5	2	W	+	+			Yes	Yes	No		47	Alive NED	NI (fatty)			*
23	71	IDC	1	2	2.0	0/3	3	2	W	+	-		*	Yes	No	No		52	Alive NED	NI			
24	79	MET	2a	3	7.5	1/10	5	1	B	-	-			Yes	No	Distant	3	5	Expired w/ Breast CA	CA, NI (fatty)		*	
25	48	IDC	1	2	1.1	0/21	1	2	W	+	+			Yes	No	No		45	Alive NED	NI			
26	56	IDLC	3	3	8.3		5		W	-	-		*	Yes	No	Local	7	10	Expired w/ Breast CA	CA, NI	*		*
27	60	ILC	2a	2	4.5	0/8	5	2	W	+	-			Yes	Yes	Distant	7	42	Alive w/ Breast CA	CA, NI	*		*
28	67	INF	3b	2.5	3.0	5/18	5	1	W	+	-		*	Yes	Yes	No		46	Alive NED	NI			
29	57	IDC	1	3	2.0	0/3	5	2	W	-	-	Breast 64 mo prior		Yes	No	No		42	Alive NED	NI (fatty)	*		
30	55	IDC	2a	3	1.5	1/15	4	3	W	-	-		*	Yes	Yes	No		42	Alive NED	CA			*
31	42	IDC	3a	3	4.7	7/14	0	1	W	+	+			Yes	No	No		41	Alive NED	NI, NI	*		
32	57	IDC	1	2.3	1.1	1/8	4	1	W	+	+	Breast 120 months prior		No	Yes	Never Disease Free	0		Expired w/ Breast CA	NI			
33	51	MUC	2b	1	6.0	0/3			W	+	-		*	Yes	No	No		43	Alive NED	CA, NI	*		*
34	46	IDC	2a	3	1.8	2/25	4	2	W	-	+			Yes	No	No		41	Alive NED	NI (fatty)			
35	54	ILC	2	2	3.0	1/9	5	1	W	+	-			Yes	No	No		41	Alive NED	NI	*		
36	77	IDC	1	2.5	1.1	1/8	4	1	W	+	+	Breast 123 mo prior		No	Yes	Never Disease Free	0	140	Expired w/ Breast CA	NI			
37	65	IDC	1	3	2.0	0/2	4	1	W	+	+			No	Yes	No		38	Alive NED	NI, NI			
38	48	IDC	2a	3	1.7	1/5	4	3	W	+	-	Breast 1 mo prior		Yes	No	No		36	Alive NED	NC, NC-M	*		
39	64	IDC	2a	3	2.2	0/19	4	2	W	+	-	Skin, Vulva 66 mo prior		No	No	No		36	Alive NED	NI-A	*		
40	58	IDC	3a	3	4.2	4/29	5	2	W	-	-			Yes	No	No		35	Alive NED	CA, NI			*
41	41	IDC	3c	3	5.2	13/31	3	2	W	-	+			Yes	No	No		34	Alive NED	CA			*
42	32	IDC	3a	3	6.0	3/20	5	2	W	+	+			Yes	No	No		33	Alive NED	CA			*
43	70	ILC	3c	2	5.7	24/28	5	2	W	+	-	Lymph node 123 mo prior		Yes	No	No		30	Alive NED	CA, CA, NI			*
44	48	DCIS	0	2		0/1			W	+	-			No	No	No		14	Alive NED	NI (fatty)			
45	61	NML							W											NM			
46		NML							W											NM			
47	45	NML																		NM			
48	32	NML																		NM			
49	43	NML																		NM			
50	46	NML																		NM			
51	28	NML																		NM			
52	55	NML							B											NM			
53	48	NML							B											NM			
54	20	NML							B											NM			
55	27	NML							A											NM			
56	57	NML							W											NM			
57		NML							W											NM (fatty), NM (fatty)			
58	52	NML																		NM			
59	35	NML																		NM, NM (fatty)			
60	27	NML							W											NM, NM (fatty)			
61	19	NML							W											NM (fatty), NM (fatty)			
62		NML							H											NM			
63		NML							B											NM, NM (fatty)			
64	44	NML							W											NM			

Table S1. Characteristics of the 64 patients who donated tissue. Age at diagnosis, Diagnosis (IDC=invasive ductal carcinoma, ILC=invasive lobular carcinoma, MET=metaplastic carcinoma, INF=inflammatory carcinoma, MUC=mucinous carcinoma, NML=normal), Stage, grade and tumor size noted during gross histopathological examination, Number of positive lymph nodes out of all tested, BI-RADS mammography score (1=normal, 2=benign, 3= probably benign, 4= suspicious, 5=malignant), Breast Density score (0=fatty, 1=average, 2=dense, 3=very dense), Race (White, Black, Hispanic, Asian), Hormone receptor (estrogen and/or progesterone) and ERBB2 status, and the tissue(s) used (NI=normal ipsilateral, CA=invasive cancer, NC=normal contralateral, NM=normal from mammoplasty; fatty=20-50% fat). Progression-free survival (PFI) and survival given in months. NED=no evidence of disease. Empty cells: no information. It should be noted that the breast reduction population was 15 years younger than the breast cancer population.