

Supporting Information

Tanaka et al. 10.1073/pnas.1120062109

Table S1. TAR fusion PCR primer sequences

Primer	Sequence	Tel region*	Primer mix
2p_TAR	5'-GCA GCA CTG AAT ACT CAA AGT CAG ACA CGA GTT AGG-3'	2p	A, B
4pq_TAR	5'-GAG CTC CGT TTT CCT CTG CAG AGA CTT CG-3'	4p, 4q	B
5p_TAR	5'-GAG TTG CGT TCT CTG TAG CAC AGA CCC TAA CAG-3'	5p	A, B
7q_TAR	5'-GCT TTG ACA CGA CTC GGG GCT TCA TTG ATG GTG-3'	7q, 12q	A, B
11q_TAR	5'-GCC ACC CGC CAA TAC ATT TGG AGC AAG AGG-3'	11q	A
17p_ter	5'-GGG ACA AGG CAA TTG TCA TGC AAT TAT CTA TGC AGG-3'	17p	A, B
18p_TAR	5'-GCA GCC CTC AAC AAT CAG GGT CAG AGT CCA G-3'	18p	A, B
p-arm_TAR	5'-GCC GTG CGA CTT TGC TCC TGC AAC ACA CG-3'	1p, 9p, 16p, 15q, Xq	A
q-arm_TAR	5'-GCC TTT GCG AGG GCG GAG TTG CGT TCT CTT TAG-3'	1q, 10q, 19q, 21q	B
Xp_ter	5'-GAA CTG TGT TAC AGA CCA GGA GCT CAT GTA CAG GGC TG-3'	Xp	A, B

*Primer anneals at single or multiple chromosome end regions. See Fig. 1B for additional details.

Table S2. Ductal carcinoma in situ tissues

Sample	Age, y	Cribriform	Nuclear grade	Comedo necrosis	Microcalcification	Extends to lobules	ER/PR/HER2	Telomerase activity	Telomere fusion
1	30	Yes	3	Yes	Yes	No	ER ⁺ /PR [±]	+	+
2	36	Yes	3	Yes	Yes	No	ER ⁻ /PR ⁻ /HER2 ⁺	+	+
3	37	Yes	3	No	Yes	No	NA	-	-
4	43	Yes	3	Yes	No	Yes	NA	+	-
5	44	Yes	2	Yes	Yes	No	NA	-	-
6	46	Yes	3	Yes	Yes	Yes	NA	+	-
7	47	Yes	3	Yes	Yes	No	ER ⁻ /PR ⁻ /HER2 ⁺	+	+
8	48	Yes	3	Yes	Yes	Yes	ER ⁺ /PR ⁺	+	+
9	51	No	2	Yes	Yes	Yes	ER ⁺ /PR ⁺ /HER2 ⁻	-	-
10	51	Yes	3	Yes	Yes	Yes	ER ⁺ /PR ⁺ /HER2 ⁻	-	-
11	51	Yes	3	Yes	Yes	No	NA	+	-
12	55	Yes	2-3	No	No	Yes	NA	-	+
13	57	Yes	3	Yes	Yes	Yes	NA	+	-
14	57	No	2-3	Yes	No	No	NA	+	-
15	58	Yes	3	Yes	Yes	No	ER ⁺ /PR [±]	-	-
16	61	Yes	3	No	No	No	NA	+	-
17	61	Yes	3	Yes	Yes	No	NA	+	-
18	62	No	1	No	Yes	No	NA	+	-
19	63	Yes	3	Yes	Yes	No	NA	+	+
20	64	Yes	3	Yes	Yes	No	NA	-	+
21	65	Yes	2	No	Yes	No	NA	-	-
22	70	Yes	3	Yes	No	Yes	ER [±] /PR ⁻	+	-
23	70	Yes	3	Yes	Yes	No	ER ⁻ /PR ⁻ /HER2 ⁺	+	+
24	71	Yes	3	Yes	Yes	No	NA	+	-
25	80	Yes	3	Yes	Yes	No	ER ⁻ /PR ⁻ /HER2 ⁺	+	+

ER, estrogen receptor; HER2, human epidermal growth factor receptor 2; NA, not available; PR, progesterone receptor.

Table S3. Invasive ductal carcinoma tissues

Sample	Age, y	Tubular score	Nuclear score	Mitotic score	Overall score	In situ components	AJCC staging (ref. 1)	ER/PR/HER2	Telomerase activity	Telomere fusion
1	31	3	2	1	6/9	Yes	pT2, N1, MX	NA	+	-
2	31	1	2	1	4/9	No	pT1a, N0, MX	ER ⁻ /PR ⁻ /HER2 ⁻	+	+
3	34	3	3	2	8/9	Yes	pT1c, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	+
4	35	3	2	3	8/9	Yes	pT1c, N0, MX	NA	-	+
5	38	3	3	1	7/9	Yes	pT2, N0, MX	NA	-	-
6	39	3	2	2	7/9	Yes	pT1c, N1a, MX	ER ⁻ /PR ⁻ /HER2 ⁺	+	-
7	40	2	2	2	6/9	Yes	pT1b, N0, MX	ER ⁺ /PR ⁺ /HER2 [±]	-	-
8	40	1	2	1	4/9	Yes	pT1a, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	-
9	43	2	2	1	5/9	Yes	pT1a, N1, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	-
10	44	3	2	1	6/9	No	pT1, N0, MX	ER ⁺ /PR ⁻ /HER2 ⁻	+	-
11	44	3	3	1	7/9	Yes	pT2, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁺	+	+
12	45	3	2	2	7/9	Yes	pT2, N1a, MX	ER ⁻ /PR ⁺ /HER2 ⁻	+	+
13	45	3	3	3	9/9	Yes	pT3, N2, MX	ER ⁻ /PR ⁻ /HER2 ⁻	+	+
14	46	1	2	1	4/9	Yes	pT1b, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	+
15	47	3	3	3	9/9	No	pT3, N0, MX	NA	+	+
16	50	3	2	1	6/9	Yes	pT1c, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	-
17	50	3	2	1	6/9	Yes	pT1c, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	-	-
18	55	2	2	1	5/9	Yes	pT2, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	-
19	56	3	2	1	6/9	Yes	pT2, N1, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	-
20	57	2	2	1	5/9	No	pT1c, N0, MX	ER ⁺ /PR ⁺ /HER2 [±]	-	-
21	65	3	3	2	8/9	Yes	pT2, N1, MX	ER ⁻ /PR ⁻ /HER2 ⁻	+	-
22	73	3	2	2	7/9	Yes	pT3, N1, MX	ER ⁺ /PR ⁺ /HER2 ⁻	+	-
23	86	2	2	1	5/9	No	pT1c, N0, MX	ER ⁺ /PR ⁺ /HER2 ⁻	-	-

AJCC, American Joint Committee on Cancer; ER, estrogen receptor; HER2, human growth factor receptor 2; NA, not available; PR, progesterone receptor.

1. Greene FL, et al., eds (2002) *AJCC Cancer Staging Manual* (Springer, New York), 6th Ed.