

Supplemental Tables

Supl. Table 1. Clinical characteristics of the patients with early breast cancer (n=105).

Qualitative Variable	Stem Cell Profile <i>CD44^{high}/CD24^{-low}</i> <i>ALDH1^{high}/CD24^{-low}</i>			Mesenchymal Profile <i>TWIST1</i>		Stem Cell and mesenchymal Profile <i>CD44^{high}/CD24^{-low}</i> <i>ALDH1^{high}/CD24^{-low}</i> <i>TWIST1</i>	
Patients enrolled	All n (%)	Positive n (%)	Negative n (%)	Positive n (%)	Negative n (%)	Positive n (%)	Negative n (%)
	100(100)	15(15.0)	85(85.0)	19(19.0)	81(81.0)	7(7.0)	93(93.0)
Menopausal							
Pre	91(91.0)	14(15.4)	77(84.6)	16(17.6)	75(82.4)	6(6.60)	85(93.4)
Post	9(9.0)	1(11.1)	8(88.9)	3(33.3)	6(66.7)	1(11.1)	8(88.9)
		N.S		0.366		0.494	
Age, years							
≥ 50	50(50.0)	7(14.0)	43(86.0)	9(18.0)	41(82.0)	4(8.0)	46(92.0)
<50	50(50.0)	8(16.0)	42(84.0)	10(20.0)	40(80.0)	3(6.0)	47(94.0)
		N.S		N.S		N.S	
T Stage							
T1	34(34.0)	5(14.7)	29(85.3)	3(8.8)	31(91.2)	2(5.9)	32(94.1)
T2/T3	66(66.0)	10(15.2)	56(84.8)	16(24.2)	50(75.6)	5(7.6)	61(92.4)
P		NS		0.063		0.753	
Grading							
1/2	34(34.3)	7(20.6)	27(79.4)	5(14.7)	29(85.3)	3(8.82)	31(91.2)
3	65(65.7)	8(12.3)	57(87.7)	13(20.0)	52(80.0)	4(6.20)	61(93.8)
Missing values	1	0.275		0.514		0.689	
LN							
N0	36(37.1)	5(13.9)	31(86.1)	3(8.33)	33(91.7)	2(5.6)	34(94.4)
N1	35(36.1)	4(11.4)	31(88.6)	7(20.0)	28(80.0)	1(2.90)	34(97.1)
N2/N3	26(26.8)	6(23.1)	20(76.9)	9(34.6)	17(65.4)	4(15.4)	22(84.6)
Missing values	3	0.437		0.036		0.155	
ER							
Positive	62(63.9)	10(16.1)	52(83.9)	12(19.3)	50(80.6)	4(6.4)	58(93.5)
Negative	35(36.1)	5(14.3)	30(85.7)	6(17.1)	29(82.8)	3(8.6)	32(91.4)
Missing values	3	0.640		0.640		0.7	
PR							
Positive	51(52.6)	9(17.6)	42(82.3)	10(19.6)	41(80.4)	4(7.80)	47(92.2)
Negative	46(47.4)	6(13.0)	40(87.0)	8(17.4)	38(82.6)	3(6.5)	43(93.5)
Missing values	3	0.585		0.8		N.S	
HER2							
Positive	38(39.6)	4(10.8)	34(89.2)	2(5.40)	36(94.6)	1(2.7)	37(97.3)
Negative	58(60.4)	10(15.9)	48(84.1)	16 (25.4)	42(74.6)	6(9.5)	52(90.5)
Missing values	4	0.362		0.006		0.238	

Supl. Table 2 : quadraplex RT-qPCR for *CD24*, *CD44*, *ALDH1*, *HPRT*: Evaluation of intra- (n=3) and inter-assay (n=5) precision.

<i>CD24</i>		<i>Intra-assay precision (n=3)</i>		
SKBR-3 cells	Cq (SD)	CV%	Copies (SD)	CV%
1	26.80 (0.12)	0.45	1.6 (± 0.15) x 10 ²	10
10	23.33 (0.25)	1.1	3.3 (± 0.72) x 10 ³	23
100	20.33 (0.19)	0.93	4.4 (± 0.72) x 10 ⁴	18
1000	16.97 (0.087)	0.51	801 (± 0.62) x 10 ⁵	7.7
<i>Inter-assay precision(n=5)</i>				
1000 SKBR-3	16.99 (0.19)	1.1	8 (± 0.13) x 10 ⁵	16
<i>CD44</i>		<i>Intra-assay precision (n=3)</i>		
SKBR-3 cells	Cq (SD)	CV%	Copies (SD)	CV%
1	31.68 (0.026)	0.082	0.81 (± 0.021)	2.6
10	28.72 (0.28)	0.97	1.5 (± 0.38) x 10	26
100	25.50 (0.35)	1.4	3.5 (± 1.1) x 10 ²	30
1000	21.84 (0.15)	0.69	1.2 (± 0.18) x 10 ⁴	15
<i>Inter-assay precision(n=5)</i>				
1000 SKBR-3	21.56 (0.20)	0.93	1.6 (± 0.32) x 10 ⁴	20
<i>ALDH1</i>		<i>Intra-assay precision (n=3)</i>		
SKBR-3 cells	Cq (SD)	CV%	Copies (SD)	CV%
1	31.64 (0.16)	0.51	0.82 (± 0.12)	15
10	28.19 (0.067)	0.24	2.4 (± 0.16) x 10	6,6
100	25.07 (0.23)	0.92	5.1 (± 1.2) x 10 ²	24
1000	21.72 (0.15)	0.69	1.3 (± 0.20) x 10 ⁴	14
<i>Inter-assay precision (n=5)</i>				
1000 SKBR-3	21.39 (0.18)	0.84	1.9 (± 0.33) x 10 ⁴	18
<i>HPRT</i>		<i>Intra-assay precision (n=3)</i>		
SKBR-3 cells	Cq (SD)	CV%	Copies (SD)	CV%
1	30.64 (0.21)	0.68	8.4 (± 0.16)	20
10	28.32 (0.25)	0.88	8.0 (± 0.20) x 10	25
100	25.59 (0.23)	0.90	1.0 (± 0.27) x 10 ³	24
1000	21.97 (0.24)	1.1	3.7 (± 0.18) x 10 ⁴	23
<i>Inter-assay precision (n=5)</i>				
1000 SKBR-3	21.71 (0.18)	0.83	4.7 (± 0.81) x 10 ⁴	17

Supl. Table 3. Correlation of *TWIST1*, *CD44*^{high}/*CD24*^{-/low} and/or *ALDH1*^{high}/*CD24*^{-/low} and the co-expression of *TWIST1* and *CD44*^{high}/*CD24*^{-/low} and/or *ALDH1*^{high}/*CD24*^{-/low} with the patients' clinical outcomes.

Qualitative Variable	Stem Cell Profile		Mesenchymal Profile		Stem Cell and mesenchymal Profile	
	<i>CD44</i> ^{high} / <i>CD24</i> ^{-/low} <i>ALDH1</i> ^{high} / <i>CD24</i> ^{-/low}		<i>TWIST1</i>		<i>CD44</i> ^{high} / <i>CD24</i> ^{-/low} <i>ALDH1</i> ^{high} / <i>CD24</i> ^{-/low} <i>TWIST1</i>	
	<i>Positive</i>	<i>Negative</i>	<i>Positive</i>	<i>Negative</i>	<i>Positive</i>	<i>Negative</i>
Recurrence						
Yes	6(24.0%)	19(76.0%)	9(36.0%)	16(64.0%)	4(16.0%)	21(84.0%)
No	9(12.0%)	66(88.0%)	10(13.3%)	65(86.7%)	3(40.0%)	72(96.0%)
P ^a	0.194		0.019		0.063	
Death						
Yes	4(28.6%)	10(71.4%)	6(42.9%)	8(57.1%)	3(21.4%)	11(78.6%)
No	11(12.8%)	75(87.2%)	13(15.1%)	73(84.9%)	4(4.7%)	82(95.3%)
P ^a	0.217		0.024		0.055	

^a Fisher's Exact Test