Online Resource 1. Expression of biomarkers in ER/PR positive human breast carcinomas

Case number	Age	Tumor size	Grade	PRA+ %	PRB+ %	PRA+PRB+ %	E-cadherin expression	
							In Situ Carcinoma	Invasive Carcinoma
1	35	1 cm	NA	50.0	21.5	20.0	Normal *	**Absent** ***
2	37	1.6 cm	II	60.9	47.9	46.6	Normal	Normal
3	41	2.2 cm	II	27.1	38.5	26.8	Decreased**	Decreased
4	42	0.9 cm	II	53.4	41.1	36.4	Normal	Decreased
5	43	1.6 cm	II	71.1	64.4	62.4	Decreased	Decreased
6	46	1 cm	I	67.9	66.5	62.6	Decreased	Decreased
7	46	2.7 cm	II	69.2	67.4	65.7	Normal	Normal
8	48	2.5 cm	III	57.5	51.5	50.8	Decreased	**Absent**
9	48	1.2 cm	I	70.2	59.0	50.6	Normal	Normal
10	48	1.5 cm	II	63.6	53.8	50.0	Decreased	**Absent**
11	52	1 cm	I	61.7	45.1	39.9	Normal	**Absent**
12	53	1.8 cm	II	42.4	44.1	39.6	Decreased	**Absent**
13	65	0.5 cm	I	68.6	68.1	61.0	Normal	Normal
14	67	3 cm	III	34.1	28.8	26.8	Decreased	Decreased
15	67	1.6 cm	NA	72.8	51.5	46.9	Decreased	**Absent**
16	68	0.7 cm	II	48.5	48.9	47.2	Normal	**Absent**
17	83	0.6 cm	I	64.4	63.5	58.9	Normal	**Absent**
18	83	1.9 cm	NA	32.9	36.0	29.3	Normal	Normal
19	84	1 cm	II	67.9	70.3	64.2	Decreased	Decreased
20	84	4 cm	II	67.0	67.9	58.0	Normal	Normal
21	96	3 cm	III	43.6	36.8	34.9	Decreased	Decreased
Mean	**58.9**			**56.9**	**51.1**	**46.6**		
SD	**18.3**			**14.0**	**14.2**	**13.9**		

Numbers in the table indicate the percent of PRA-positive (PRA+), PRB-positive (PRB+), and double positive PRA+PRB+ tumor cells in invasive carcinoma with at least 1000 tumor cell counted per sample.

NA - tumor grade was not presented in the pathology report

* Normal - E-cadherin expression in carcinoma is similar to E-cadherin expression in normal mammary tissue adjacent to the tumor

** Decreased - E-cadherin expression in carcinoma is decreased when compared with the normal mammary tissue adjacent to the tumor

*** Absent - E-cadherin expression is lost in the majority of cells in invasive carcinoma