

**Supplementary Table 1** Associations between MRP2 expression and breast cancer recurrence using the H-score median as cut-off.

	ER+/TAM+			ER-/TAM-		
	Cases/ controls (n)	Matched OR (95% CI) <sup>a</sup>	Adjusted OR (95% CI) <sup>b</sup>	Cases/ controls (n)	Matched OR (95% CI) <sup>a</sup>	Adjusted OR (95% CI) <sup>b</sup>
MRP2 expression by median <sup>∞</sup>						
None	179/191	1	1	147/139	1	1
Positive	255/232	0.91 (0.67,1.23)	0.84 (0.63,1.12)	110/112	1.06 (0.72,1.55)	0.99 (0.66,1.47)

<sup>a</sup> Estimated using conditional logistic regression with conditioning on the matched factors (ER status, diagnosis year, county, menopausal status and UICC stage)

<sup>b</sup> Estimated using logistic regression with additional adjustment for receipt of chemotherapy, receipt of radiotherapy, surgery type, age at diagnosis and comorbidity. Adjusted ORs resulted in a different number of cases/controls than matched ORs: ER+/TAM+=423/414, ER-/TAM-=245/212.

<sup>∞</sup> Median based on the study population = 13.33.

**Supplementary Table 2** Association between baseline MRP2 expression and breast cancer recurrence, by median time to recurrence, in the ER+/TAM+ group.

Time to recurrence (yrs post diagnosis)	Median time to recurrence (yrs) <sup>∞</sup>	Cases/ controls	MRP2	
			Matched OR (95% CI) <sup>a</sup>	Adjusted OR (95% CI) <sup>b</sup>
1-5	2.8	332/126	0.99 (0.60,1.64)	1.09 (0.64,1.85)
6-10	6.6	102/297	1.23 (0.73,2.08)	1.25 (0.72,2.14)

<sup>∞</sup> Median time to recurrence based on recurrent cases.

<sup>a</sup> Estimated using conditional logistic regression with conditioning on the matched factors (diagnosis year, county of residence, menopausal status and UICC stage).

<sup>b</sup> Estimated using logistic regression with additional adjustment for receipt of chemotherapy, receipt of radiotherapy, surgery type, age at diagnosis and comorbidity. Adjusted ORs resulted in a different number of cases/controls than matched ORs: 2.8 yrs=327/122, 6.6 yrs=96/292

**Supplementary Table 3** Associations between MRP2 expression and breast cancer recurrence by chemotherapy group, within ER/TAM group.

	ER+/TAM+			ER-/TAM-		
	Cases/ Controls (n)	Matched OR (95% CI) <sup>a</sup>	Adjusted OR (95% CI) <sup>b</sup>	Cases/ Controls (n)	Matched OR (95% CI) <sup>a</sup>	Adjusted OR (95% CI) <sup>b</sup>
Chemotherapy –	377/376	0.99 (0.71,1.38)	1.01 (0.72,1.43)	38/96	0.78 (0.31,1.96)	1.37 (0.40,4.72)
Chemotherapy +	116/104	0.51 (0.18,1.43)	0.51 (0.16,1.65)	219/155	0.73 (0.47,1.14)	0.76 (0.48,1.21)

<sup>a</sup> Estimated using conditional logistic regression with conditioning on the matched factors (diagnosis year, county of residence, menopausal status and UICC stage).

<sup>b</sup> Estimated using logistic regression with additional adjustment for receipt of chemotherapy, receipt of radiotherapy, surgery type, age at diagnosis and comorbidity. Adjusted ORs resulted in a different number of cases/controls than matched ORs: ER+/chemotherapy– =367/367, ER+/chemotherapy+ =56/47, ER-/chemotherapy– =33/61, ER-/chemotherapy+ =212/151.

**Supplementary Table 4** Mean differences in MRP2 expression in primary tumor vs. recurrent tumor within strata of chemotherapy.

MRP2 expression at diagnosis	Difference between H-score in primary tumor vs. recurrent tumor			
	Cases	Mean difference <sup>∞</sup>	Std deviation	P-value
Chemotherapy–	120	-7.01	39.85	0.1587
Chemotherapy+	82	+1.10	46.33	0.3261

<sup>∞</sup> Mean difference was examined with Wilcoxon Signed Rank Test

**Supplementary Table 5** Mean differences in MRP2 expression in primary tumor vs. recurrent distant tumor within ER/TAM groups.

MRP2 expression at diagnosis	Difference between H-score in primary tumor vs. recurrent tumor			
	Cases	Mean difference	Std deviation	P-value
ER+/TAM+	93	-9.21	40.72	0.1283
ER-/TAM-	59	+2.37	47.54	0.3326

Mean difference was examined with Wilcoxon Signed Rank Test .The sample is restricted distant recurrences, defined as tumors in any other tissue than breast tissue.

**Supplementary Table 6** Frequencies of MRP2 differences among distant recurrences within ER/TAM groups.

	ER+/TAM+ N (%)	ER-/TAM- N (%)	Total
Decreased MRP2	47 (51)	23 (39)	70
Stable MRP2	6 (6.5)	6 (10)	12
Increased MRP2	40 (43)	30 (51)	70

The table shows the frequencies of cases whose MRP2 expression were either decreased, remained or increased in the recurrent tumor, compared to their primary tumor.