

## **Supplementary Material**

### **HER2DX Genomic Assay in HER2-positive Early Breast Cancer Treated with Trastuzumab and Pertuzumab: A Correlative Analysis from PHERGain Phase II Trial**

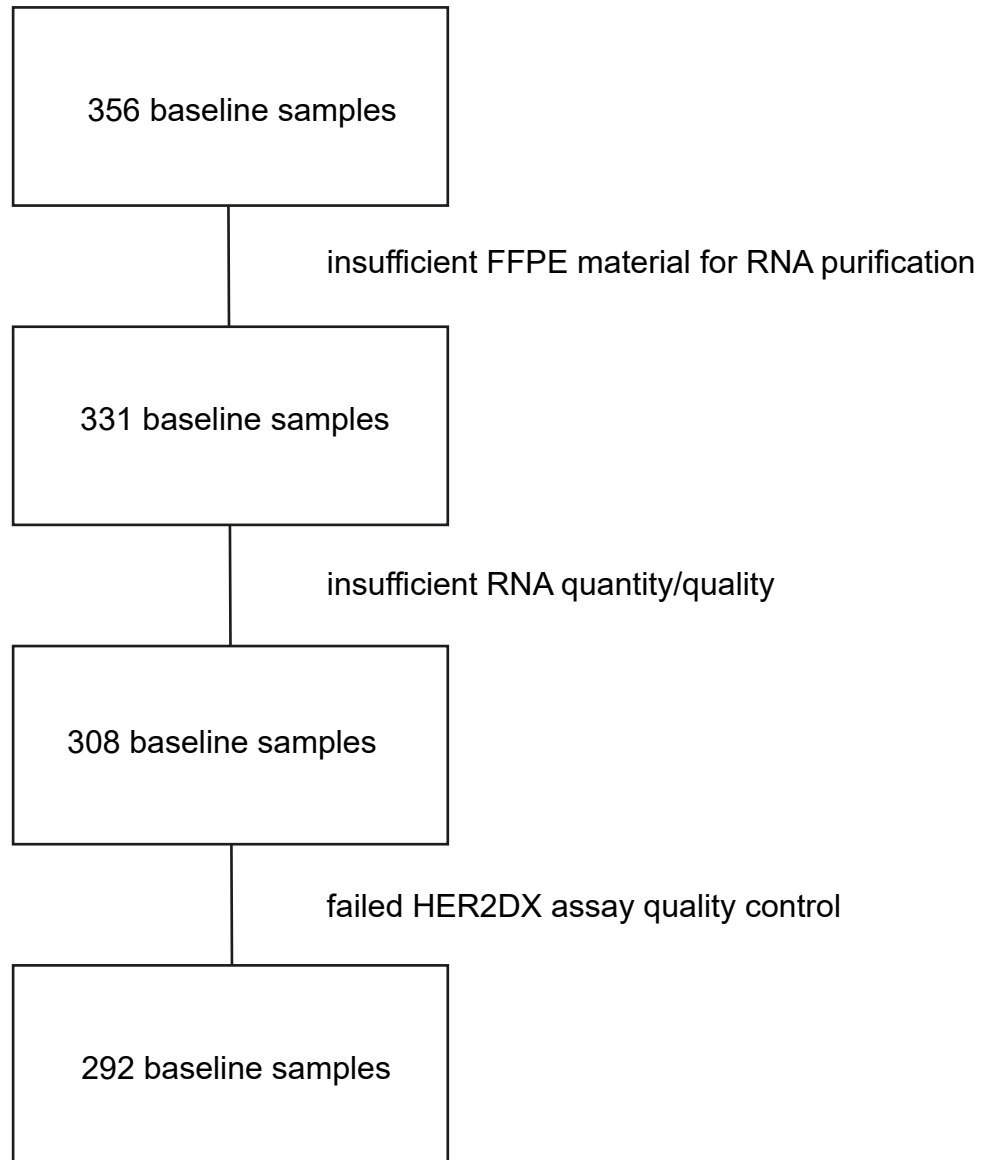
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**Supplementary Table 1. MVA models for pCR prediction.** Model 1 includes clinicopathological data. Model 2 includes clinicopathological data and HER2DX pCR score as a categorical variable. Model 3 includes clinicopathological data and HER2DX pCR score as a continuous variable.

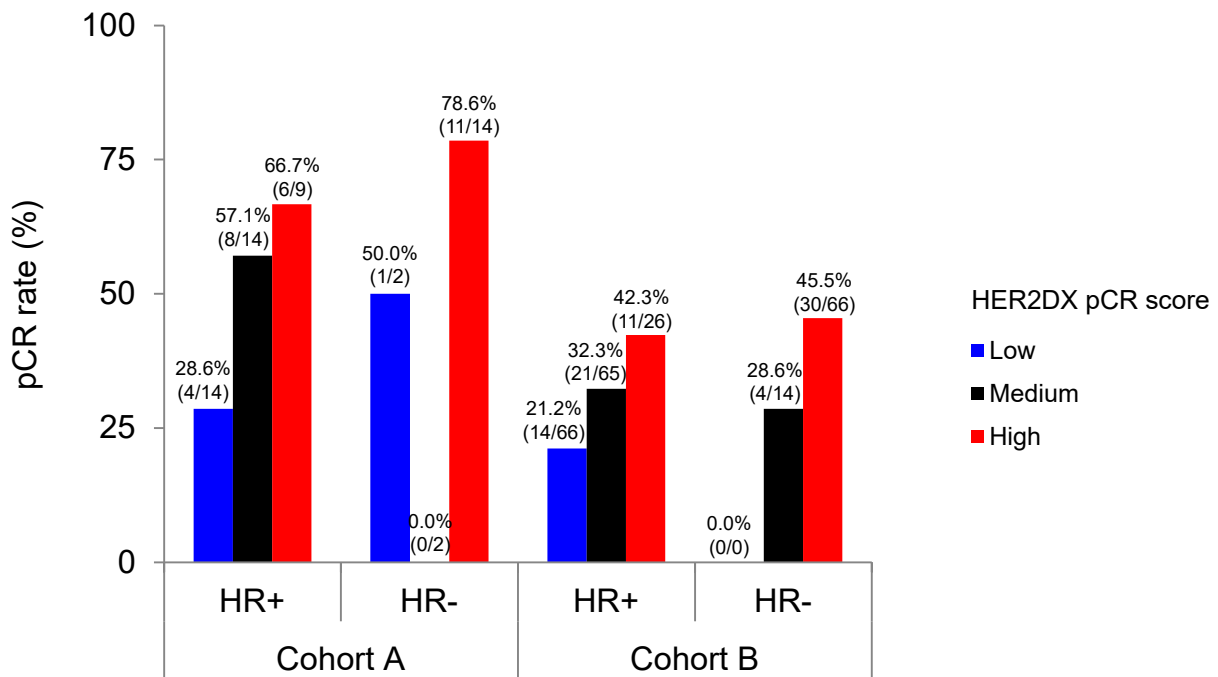
<b>Model 1</b>	<b>Odds ratio</b>	<b>95% CI (Low)</b>	<b>95% CI (High)</b>	<b>p-value</b>
Hormone receptor positive	0.60	0.34	1.06	0.078
<b>HER2 3+</b>	<b>2.69</b>	<b>1.35</b>	<b>5.66</b>	<b>0.006</b>
T2	0.79	0.38	1.66	0.531
T3	0.55	0.21	1.40	0.213
N1	0.71	0.41	1.23	0.225
N2	0.83	0.26	2.48	0.733
Ki67	1.00	0.99	1.02	0.642
G1 or G2	1.60	0.72	3.68	0.253
G3	1.30	0.60	2.92	0.514
<b>Cohort B</b>	<b>0.37</b>	<b>0.19</b>	<b>0.69</b>	<b>0.002</b>
<b>Model 2</b>	<b>Odds ratio</b>	<b>95% CI (Low)</b>	<b>95% CI (High)</b>	<b>p-value</b>
<b>HER2DX pCR Low</b>	<b>0.37</b>	<b>0.14</b>	<b>0.92</b>	<b>0.034</b>
HER2DX pCR Med	0.67	0.32	1.37	0.274
Hormone receptor positive	0.91	0.45	1.83	0.790
HER2 3+	2.05	0.98	4.49	0.062
T2	1.00	0.47	2.16	0.997
T3	0.72	0.27	1.90	0.504
N1	0.72	0.41	1.24	0.235
N2	0.86	0.28	2.59	0.789
Ki67	1.00	0.99	1.01	0.883
G1 or G2	1.74	0.77	4.10	0.190
G3	1.22	0.55	2.79	0.627
<b>Cohort B</b>	<b>0.35</b>	<b>0.18</b>	<b>0.66</b>	<b>0.001</b>
<b>Model 3</b>	<b>Odds ratio</b>	<b>95% CI (Low)</b>	<b>95% CI (High)</b>	<b>p-value</b>
<b>HER2DX pCR score (cont.variable)</b>	<b>1.69</b>	<b>1.07</b>	<b>2.75</b>	<b>0.028</b>
Hormone receptor positive	0.95	0.48	1.90	0.884
HER2 3+	2.03	0.97	4.44	0.065
T2	1.04	0.48	2.28	0.923
T3	0.73	0.27	1.93	0.525
N1	0.75	0.43	1.30	0.311
N2	0.88	0.28	2.65	0.824
Ki67	1.00	0.99	1.01	0.977
G1 or G2	1.59	0.71	3.67	0.266
G3	1.12	0.51	2.56	0.777
<b>Cohort B</b>	<b>0.35</b>	<b>0.18</b>	<b>0.67</b>	<b>0.002</b>

**Supplementary Table 2. Bootstrap test comparing the C-statistics of model 2 vs model 1:  
p-value of 0.13**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
<b>AIC</b>	376.8	375.8	373.5
<b>R-squared</b>	0.14	0.17	0.17
<b>C-statistics</b>	0.69 (0.63 – 0.76)	0.71 (0.65 – 0.77)	0.70 (0.64 – 0.77)



**Supplementary Figure 1. Consort diagram of samples available for HER2DX**



**Supplementary Figure 2. pCR rates according to HER2DX pCR score groups in patients with hormone receptor-positive (HR+) and -negative (HR-) tumors in cohorts A and B.**