

**Supplementary Table 3** Relationships between patient outcomes and clinicopathological features in the NAC-cohort

**Disease-free survival**

Variables		Univariate			Multivariate		
		HR	95% CI	P-value	HR	95% CI	P-value
Age		0.14	0.02-1.04	0.055	0.09	0.01-0.80	0.031
Chemo-effect	pCR vs. non-pCR	1.88E-09	1.29-1.29	0.083			
ypT (mm)		20.32	2.79-113.88	0.004	12.93	1.68-83.97	0.016
ypN	Positive vs. negative	2.04	0.88-5.56	0.102	1.59	0.63-4.56	0.338
Histology		5.46E+08	0.87-0.87	0.066			
Tumour grade		0.94	0.22-2.72	0.919			
Ki67 L.I.		0.80	0.10-4.58	0.819	1.34	0.15-9.20	0.784
PgR	Positive vs. negative	0.61	0.28-1.38	0.223	0.38	0.17-0.91	0.031
MUC1 staining		0.39	0.02-1.88	0.290	0.45	0.02-2.23	0.386

**Overall survival (breast cancer-related)**

Variables		Univariate			Multivariate		
		HR	95% CI	P-value	HR	95% CI	P-value
Age		0.11	0.01-1.51	0.100	0.07	0.004-1.23	0.069
Chemo-effect	pCR vs. non-pCR	5.10E-09	2.17-2.17	0.176			
ypT (mm)		20.65	2.60-127.57	0.006	14.43	1.52-124.18	0.021
ypN	Positive vs. negative	2.55	0.83-11.06	0.107	2.13	0.55-11.39	0.286
Histology		5.46E+08	0.54-0.54	0.143			
Tumour grade		0.63	0.20-2.75	0.489			
Ki67 L.I.		1.66	0.16-11.10	0.644	5.43	0.37-64.84	0.206
PgR	Positive vs. negative	0.50	0.19-1.38	0.174	0.27	0.09-0.80	0.019
MUC1 staining		1.64E-09	1.09-1.09	0.060	1.53E-10	0.00-1.60	0.113

All biomarkers were assessed based on biopsy specimens

NAC neoadjuvant chemotherapy, pCR pathological complete response, NST no special type, L.I. labelling index, HR hazard ratio, CI confidence interval, PgR progesterone receptor, MUC1 mucin 1, Ap apical