

SUPPLEMENTARY MATERIALS

Supplementary Table 1. Clinical-pathological characteristics between the cohort of patients with CeLTIL and the cohort of patients without the CeLTIL data from the NeoALTTO trial^a

	CeLTIL evaluable (n=196)	CeLTIL non-evaluable (n=107)	<i>P</i> (evaluable vs non-evaluable)
Age at diagnosis, median (range), years	49 (23-75)	50 (25-80)	0.526 (Man-Wilcoxon)
Pre-treatment tumor size			
T2	117 (59.7%)	67 (62.6%)	0.708 (Chi-square)
≥ T3	79 (40.3%)	40 (37.4%)	
Pre-treatment nodal status			
N0/1	166 (84.7%)	90 (84.1%)	1.000 (Chi-square)
≥ N2, Nx or missing	30 (15.3%)	17 (15.9%)	
Hormone receptor status			
Positive	106 (54.1%)	46 (43%)	0.084 (Chi-square)
Negative	90 (45.9%)	61 (57%)	
pCR status (note – some cases have unknown pCR status)			
Yes	56 (28.6%)	52 (48.6%)	0.001 (logistic regression stratified by hormone receptor status)
No	134 (68.4%)	51 (47.7%)	
Unknown	6 (3%)	4 (3.7%)	
EFS events	60 (30.7%)	24 (22.4%)	0.218 (log-rank)
Deaths	36 (18.4%)	17 (15.9%)	0.721 (log-rank)

^aAll cases from the lapatinib-only arm are excluded. EFS = event-free survival, pCR = pathological complete response.

Supplementary Table 2. Multivariate Cox proportional hazards models for event-free survival and overall survival^a

	HR (95% CI)	<i>P</i>
Event-free survival		
CelTIL score	0.40 (0.17 – 0.94)	0.04
Baseline TILs (per 10%)	0.73 (0.57-0.94)	0.01
Pre-NAC tumor size	0.81 (0.46-1.44)	0.47
Pre-NAC nodal status	1.11 (0.45-2.69)	0.83
HR status	0.76 (0.43 – 1.35)	0.35
Planned surgery	1.05 (0.56-1.99)	0.87
pCR status	0.61 (0.3-1.23)	0.17
Treatment arm	0.82 (0.46-1.49)	0.52
Overall survival		
CelTIL score	0.43 (0.20-0.92)	0.03
Baseline TILs (per 10%)	0.85 (0.64-1.13)	0.26
Pre-NAC tumor size	0.46 (0.21-0.98)	0.04
Pre-NAC nodal status	0.8 (0.26-2.46)	0.70
HR status	0.67 (0.31-1.46)	0.32
Planned surgery	1.69 (0.63-4.58)	0.30
pCR status	0.38 (0.13-1.15)	0.09
Treatment arm	0.57 (0.25-1.3)	0.18

^a CI = confidence interval; HR = hazard ratio; pCR = pathological complete response

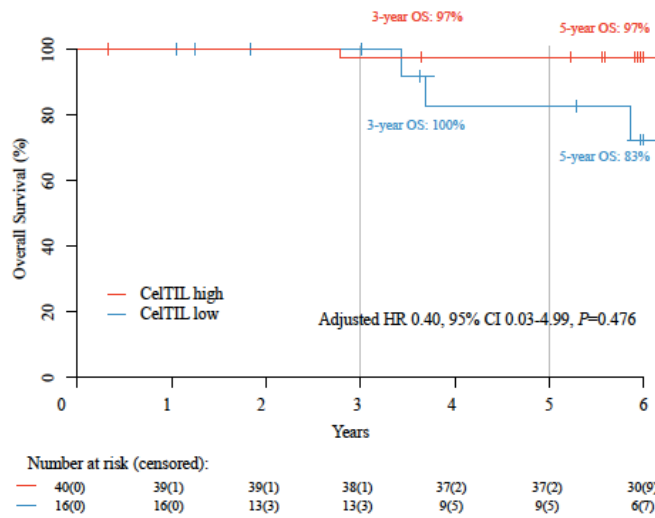
Supplementary Table 3. Relationship between tumor infiltrating lymphocytes (TILs) at week 2 and tumor cellularity at week 2 and outcome^a

	Event-Free Survival		Overall Survival	
	HR (95% CI)	<i>P</i>	HR (95% CI)	<i>P</i>
TILs (per 10% increment)	0.79 (0.68-0.92)	0.002	0.88 (0.75-1.03)	0.11
Tumor cellularity (per 1% increment)	1 (0.99-1.01)	0.60	1.01 (1-1.02)	0.16

^aHR = hazard ratio; CI = confidence interval

Supplementary Figure 1. Survival outcomes in NeoALTTO based on CelTIL score. **(A)** OS in patients with a pCR; **(B)** OS in patients with a non-pCR. Estimates of EFS and OS were from Kaplan-Meier curves and tests of differences by cox proportional hazard model. All statistical tests were two sided. EFS =Event-free survival; OS = Overall Survival; HR = Hazard Ratio; CI = Confident Interval.

A.



B.

