

Supplementary Table 3. Cox regression analysis for the cN+ subgroups

	cN+/pN+								cN+/pN0							
	Cox Univariate Analysis				Cox Multivariate Analysis				Cox Univariate Analysis				Cox Multivariate Analysis			
	HR	95% CI		p-value	HR	95% CI		p-value	HR	95% CI		p-value	HR	95% CI		p-value
Age at Diagnosis, years																
Per 1-year increase	1.02	1.01	1.02	0.000	1.02	1.01	1.02	0.000	1.02	1.01	1.03	0.000	1.020	1.01	1.03	0.000
Gender																
Male	1.00	Reference							1.00	Reference						
Female	0.93	0.77	1.12	0.437					0.87	0.72	1.06	0.164				
Charlson Comorbidity Score																
0	1.00	Reference			1.00	Reference			1.00	Reference						
1	1.10	0.94	1.28	0.260	1.06	0.90	1.26	0.477	1.17	1.00	1.37	0.048				
≥ 2	1.52	1.15	2.01	0.003	1.34	0.99	1.80	0.057	1.10	0.81	1.49	0.540				
Grade																
Well-Differentiated	1.00	Reference							1.00	Reference			1.00	Reference		
Moderately-Differentiated	0.86	0.58	1.26	0.427					1.53	1.06	2.21	0.024	1.58	1.07	2.33	0.021
Poorly-Differentiated	1.06	0.72	1.55	0.779					1.74	1.20	2.50	0.003	1.76	1.20	2.58	0.004
Undifferentiated	1.18	0.60	2.32	0.635					3.30	1.72	6.31	0.000	2.93	1.51	5.69	0.001
Histology																
Adenocarcinoma	1.00	Reference							1.00	Reference						
SCC	0.98	0.80	1.21	0.865					0.97	0.81	1.15	0.691				
LVSI																
Negative	1.00	Reference			1.00	Reference			1.00	Reference						
Positive	1.53	1.25	1.87	0.000	1.32	1.06	1.64	0.011	1.48	1.05	2.10	0.025				
Unknown	1.08	0.93	1.26	0.294	1.18	1.01	1.39	0.043	0.92	0.80	1.07	0.274				
Margin Status																
Negative Margins	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
Positive Margins	1.95	1.50	2.54	0.000	1.64	1.24	2.16	0.001	1.69	1.15	2.47	0.008	1.56	1.04	2.32	0.030
Pathologic T-Stage																
ypT0	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
ypT1	1.05	0.76	1.45	0.758	1.02	0.74	1.41	0.899	1.05	0.85	1.29	0.656	1.00	0.80	1.25	0.990
ypT2	1.22	0.92	1.63	0.168	1.22	0.91	1.63	0.185	1.31	1.08	1.60	0.006	1.26	1.02	1.56	0.033

ypT3	1.69	1.32	2.17	0.000	1.53	1.19	1.98	0.001	1.80	1.51	2.15	0.000	1.60	1.31	1.96	0.000
ypT4	1.98	1.19	3.29	0.009	1.51	0.86	2.64	0.147	1.98	0.94	4.21	0.074	1.87	0.83	4.22	0.131
Pathologic N-Stage																
ypN1	1.00	Reference			1.00	Reference										
ypN2	1.16	0.98	1.36	0.084	1.11	0.93	1.33	0.258								
ypN3	1.74	1.37	2.21	0.000	1.55	1.18	2.03	0.002								
Chemotherapy Regimen																
Neoadjuvant	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
Neoadjuvant + Adjuvant	0.79	0.65	0.94	0.010	0.82	0.67	1.00	0.048	0.65	0.45	0.94	0.021	0.59	0.39	0.88	0.009
Radiation Dose, Gy																
Per 0.01-Gy increase	1.00	1.00	1.00	0.134					1.00	1.00	1.00	0.079	1.00	1.00	1.00	0.104

HR, hazard ratio; CI, confidence interval; SCC, squamous cell carcinoma; LVSI, lymphovascular space invasion; Gy, gray.