

**Supplemental Table 2: Cox regression analysis for cNany and pN0 or pN+ subgroups**

	cNany/pN0								cNany/pN+							
	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	1.02	1.03	0.000	1.02	1.01	1.03	0.000	1.01	1.01	1.02	0.000	1.010	1.01	1.02	0.000
Gender																
Male	1.00	Reference			1.00	Reference			1.00	Reference						
Female	0.83	0.72	0.95	0.009	0.85	0.72	0.99	0.039	0.95	0.81	1.11	0.522				
Charlson Comorbidity Score																
0	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
1	1.24	1.11	1.40	0.000	1.21	1.06	1.38	0.004	1.08	0.95	1.23	0.234	1.03	0.90	1.18	0.660
≥ 2	1.25	1.01	1.55	0.038	1.29	1.02	1.64	0.032	1.48	1.17	1.87	0.001	1.36	1.06	1.75	0.016
Grade																
Well-Differentiated	1.00	Reference			1.00	Reference			1.00	Reference						
Moderately-Differentiated	1.74	1.33	2.26	0.000	1.71	1.30	2.26	0.000	1.01	0.73	1.38	0.974				
Poorly-Differentiated	1.97	1.51	2.57	0.000	1.90	1.45	2.50	0.000	1.26	0.92	1.72	0.144				
Undifferentiated	2.36	1.48	3.77	0.000	2.16	1.32	3.55	0.002	1.27	0.74	2.16	0.382				
Histology																
Adenocarcinoma	1.00	Reference							1.00	Reference						
SCC	1.03	0.90	1.16	0.691					0.92	0.77	1.09	0.351				
LVSI																
Negative	1.00	Reference							1.00	Reference			1.00	Reference		
Positive	1.28	0.98	1.67	0.066					1.67	1.41	1.99	0.000	1.45	1.21	1.74	0.000
Unknown	0.98	0.88	1.09	0.677					1.12	0.98	1.27	0.088	1.18	1.03	1.36	0.017
Margin Status																
Negative Margins	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
Positive Margins	1.75	1.31	2.34	0.000	1.63	1.20	2.22	0.002	1.89	1.54	2.33	0.000	1.69	1.36	2.09	0.000
Pathologic T-Stage																
T0	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
T1	1.02	0.88	1.19	0.757	0.99	0.84	1.16	0.872	1.07	0.82	1.40	0.602	1.03	0.79	1.36	0.806

T2	1.26	1.09	1.47	0.002	1.14	0.97	1.35	0.108	1.09	0.85	1.39	0.491	1.07	0.84	1.37	0.588
T3	1.58	1.38	1.82	0.000	1.42	1.22	1.65	0.000	1.51	1.21	1.87	0.000	1.34	1.08	1.68	0.009
T4	2.12	1.24	3.62	0.006	1.53	0.81	2.87	0.190	2.11	1.41	3.16	0.000	1.55	1.00	2.40	0.049
Pathologic N-Stage																
N1	NA				NA				1.00	Reference			1.00	Reference		
N2	NA				NA				1.18	1.03	1.37	0.019	1.17	1.00	1.36	0.057
N3	NA				NA				1.71	1.37	2.12	0.000	1.54	1.21	1.96	0.000
Chemotherapy Regimen																
Neoadjuvant	1.00	Reference			1.00	Reference			1.00	Reference			1.00	Reference		
Neoadjuvant + Adjuvant	0.72	0.54	0.95	0.020	0.65	0.47	0.89	0.007	0.78	0.67	0.91	0.002	0.80	0.68	0.94	0.008
Radiation Dose, Gy																
Per 0.01-Gy increase	1.00	1.00	1.00	0.001	1.00	1.00	1.00	0.036	1.00	1.00	1.00	0.050	1.00	1.00	1.00	0.064

Abbreviations: HR, hazard ratio; CI, confidence interval; SCC, squamous cell carcinoma; LVSI, lymphovascular space invasion; Gy, Gray