

## Supplemental Appendix 1

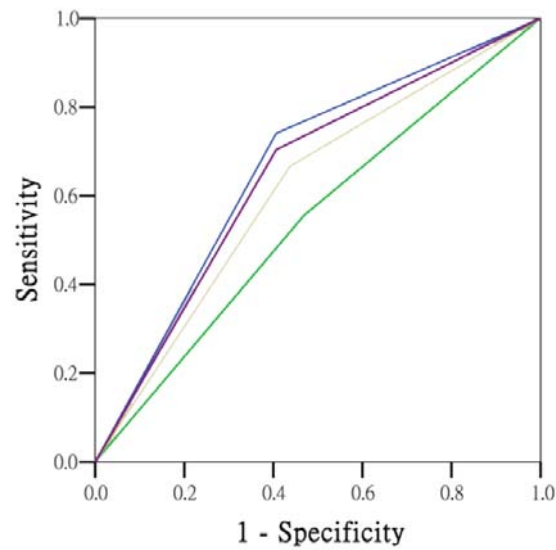


Figure 1. Receiver operating characteristic (ROC) curves were created to evaluate the predictive performance for nodal recurrence among N-MTV2.5, N-MTV50%, N-SUVmax, N-TLG40%, and N-TLG50%. The area under the curve was  $0.66 \pm 0.06$  for N-TLG40% (brown),  $0.62 \pm 0.06$  for N-TLG50% (purple),  $0.62 \pm 0.06$  for N-SUVmax (blue),  $0.55 \pm 0.07$  for N-MTV2.5 (green), and  $0.53 \pm 0.07$  for N-MTV50% (yellow), respectively.

## Supplemental Appendix 2

**Table 1**

Association between PET/CT- and CT-based parameters and initial response of neck lymph nodes using logistic regression analysis

<b>Variables</b>	<b>OR</b>	<b>95% CI</b>	<b>P</b>
<b>N-classification</b>			
N1-2 vs. N3	2.86	0.42-19.60	0.29
N1 vs. N2-3	1.73	0.27-11.23	0.57
<b>CT-related parameters</b>			
central necrosis			
no vs. yes	10.10	3.03-34.48	< 0.001
maximal diameter (cm)			
< 2.4 vs. $\geq$ 2.4	2.42	0.20-28.97	0.49
N-GTV (ml)			
< 8.9 vs. $\geq$ 8.9	3.32	1.16-9.48	0.025
<b>PET/CT-related parameters</b>			
N-TLG40% (g)			
< 38.0 vs. $\geq$ 38.0g	1.79	0.50-6.46	0.37
N-SUVmax			
< 6.1 vs. $\geq$ 6.1	1.30	0.23-7.36	0.76
N-MTV2.5 (ml)			
< 3.0 vs. $\geq$ 3.0	2.71	0.49-14.92	0.25

Supplemental Appendix 3

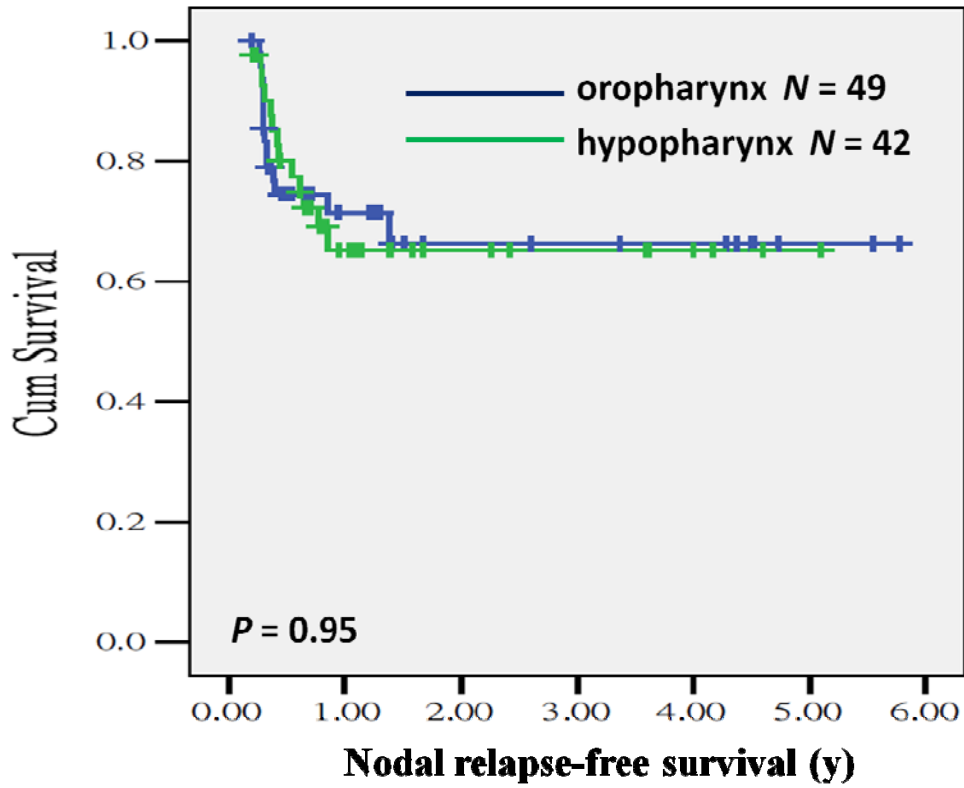


Figure 2. Nodal relapse-free survival according to the origin of primary tumor ( $P = 0.95$ ).