

Supplementary File

Table S1. Univariable Cox regression analysis for disease specific survival. Asterisk marks p values < 0.05

Variable	Reference	HR (95% CI)	p
T STAGE	T1	T2: 3.18 (0.43–23.72)	0.26
		T3: 5.72 (0.77–42.07)	0.09
		T4 :7.48 (1.03–54.09)	0.05
N STAGE	N0	N1: 71 (0.81–3.65)	0.16
		N2: 3.07 (1.69–5.55)	0.0002*
		N3: 2.09 (0.68–6.43)	0.19
Age	1 year	0.99 (0.97–1.01)	0.81
Site	Nasopharynx	Oropharynx: 0.93 (0.41–2.12)	0.87
		Hypopharynx: 1.54 (0.62–3.82)	0.35
		Larynx: 1.27 (0.55–2.92)	0.57
		Oral cavity: 3.19 (1.35–7.52)	0.008*
RTCT	RTCT vs. RT	0.91 (0.57–1.44)	0.69
Smoking	10 pack years	1 (0.99–1)	0.96
log 10 pre-NLR	1 log NLR	3.1 (1.38–6.95)	0.006*
log10 post-NLR	1 log NLR	2.43 (1.36–4.36)	0.003*

HR — hazard ratio; CI — confidence interval; RT — radiation therapy; RTCT — radiochemotherapy; AJCC — American Joint Committee on Cancer pre-NLR — pre-treatment neutrophil-to-lymphocyte ratio; post-NLR — post-treatment neutrophil-to-lymphocyte ratio

Table S2. Univariable Cox regression analysis for progression free survival. Asterisk marks p values < 0.05

Variable	Reference	HR (95% CI)	p
T STAGE	T1	T2: 3.36 (0.45–25.05)	0.24
		T3: 4.22 (0.56–31.47)	0.16
		T4: 5.04 (0.68–36.87)	0.11

Variable	Reference	HR (95% CI)	p
N STAGE	N0	N1: 0.65 (0.28–1.5)	0.32
		N2: 1.22(0.71–2.09)	0.46
		N3: 0.92 (0.27–3.11)	0.89
Age	1 year	0.99 (0.97–1.02)	0.65
Site	Nasopharynx	Oropharynx: 0.93 (0.38–2.26)	0.88
		Hypopharynx: 1.07 (0.37–3.09)	0.89
		Larynx: 1.06 (0.42–2.69)	0.88
		Oral cavity: 2.69 (1.03-7.04)	0.04*
Treatment	RTCT vs. RT	0.95 (0.55–1.63)	0.86
Smoking	10 pack-years	0.99 (0.99–1)	0.71
log 10 pre-NLR	1 log NLR	2.08 (0.79–5.49)	0.14
log10 post-NLR	1 log NLR	1.26 (0.63–2.52)	0.51

HR — hazard ratio; CI — confidence interval; RT — radiation therapy; RTCT — radiochemotherapy; AJCC — American Joint Committee on Cancer pre-NLR — pre-treatment neutrophil-to-lymphocyte ratio; post-NLR — post-treatment neutrophil-to-lymphocyte ratio

Table S3. Univariable Cox regression analysis for distant failure free survival (DFFS). Asterisk marks p values < 0.05

Variable	Reference	HR (95% CI)	p
T STAGE	T1	T2: 0.76 (0.17–3.51)	0.73
		T3: 0.8 (0.17–3.78)	0.78
		T4 1.37 (0.32–5.87)	0.68
N STAGE	N0	N1: 3.2 (0.8–12.81)	0.09
		N2: 5.42 (1.64–17.85)	0.005*
		N3: 4.76 (0.79–28.6)	0.09
Age	1 year	0.98 (0.95-1)	0.17
Site	nasopharynx	Oropharynx: 1.02 (0.35–3)	0.96
		Hypopharynx: 0.81 (0.2–3.27)	0.77
		Larynx: 0.81 (0.25–2.64)	0.73
		Oral cavity: 0.57 (0.1 -3.17)	0.52
Treatment	RTC T vs. RT	1.28 (0.56–2.91)	0.54
Smoking	10 pack-years	0.99 (0.99–1)	0.76

Variable	Reference	HR (95% CI)	p
log 10 pre-NLR	1 log NLR	4.52 (1.22–16.8)	0.02*
log10 post-NLR	1 log NLR	1.78 (0.65–4.84)	0.25

HR — hazard ratio; CI — confidence interval; RT — radiation therapy; RTCT — radiochemotherapy; AJCC — American Joint Committee on Cancer pre-NLR — pre-treatment neutrophil-to-lymphocyte ratio; post-NLR — post-treatment neutrophil-to-lymphocyte ratio

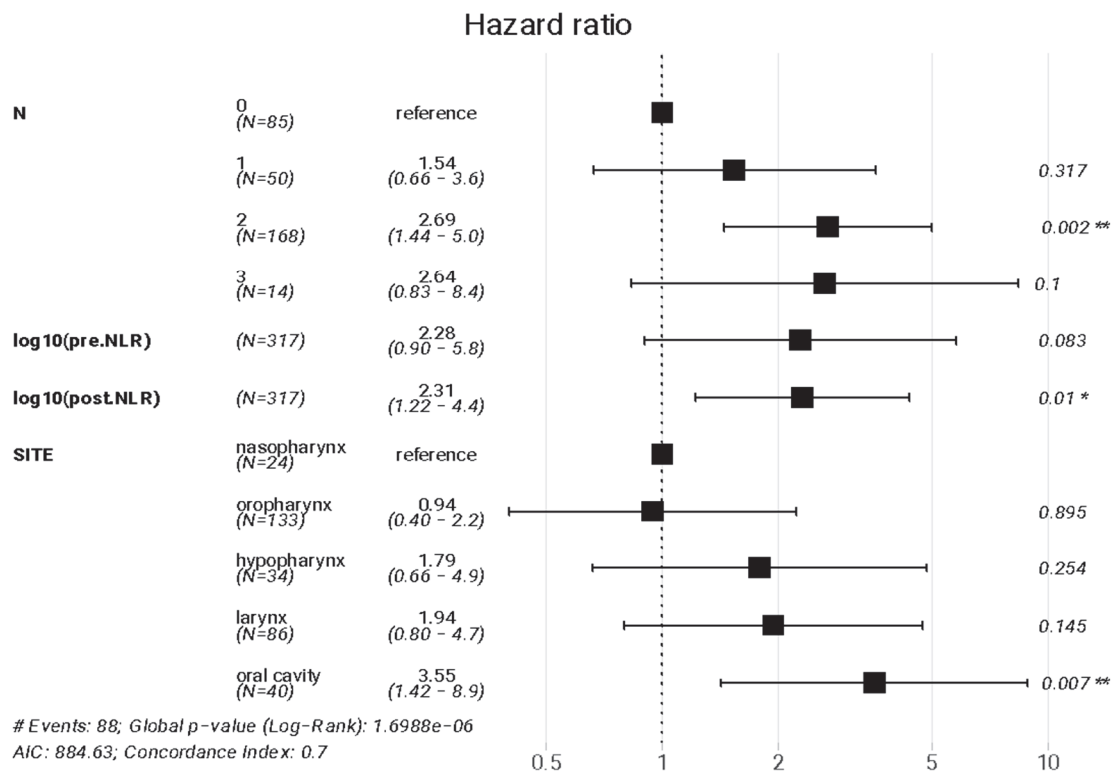


Figure S1. Multivariable Cox regression analysis of disease specific survival. Asterisk marks p values < 0.05

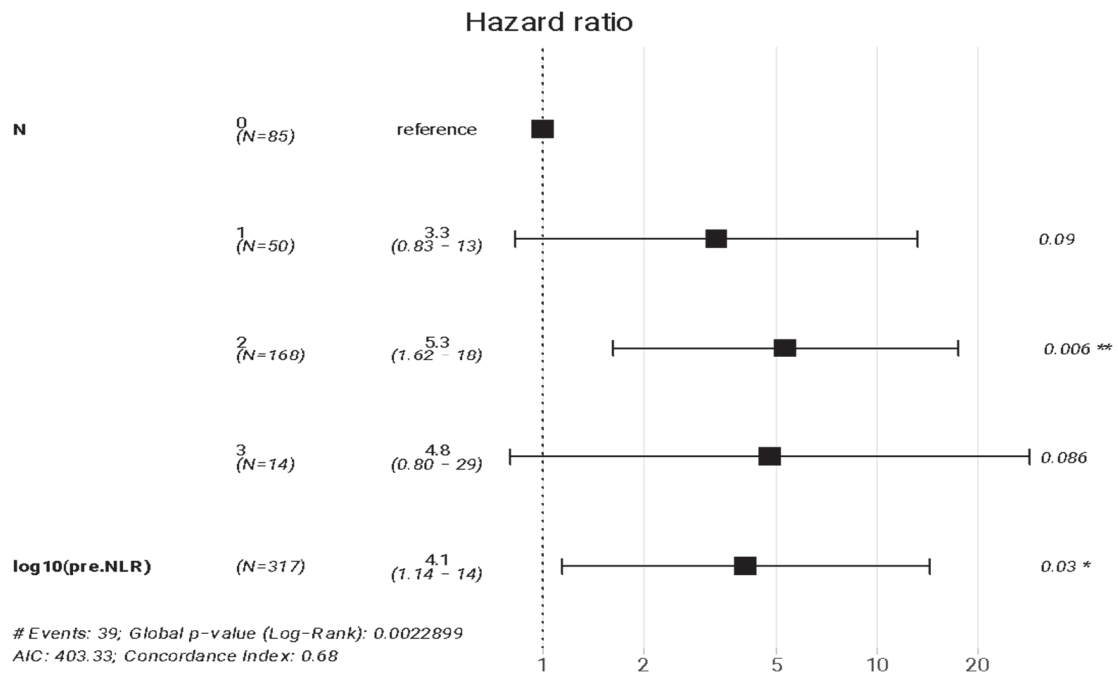


Figure S2. Multivariable Cox regression analysis of distant failure free survival. Asterisk marks p values < 0.05

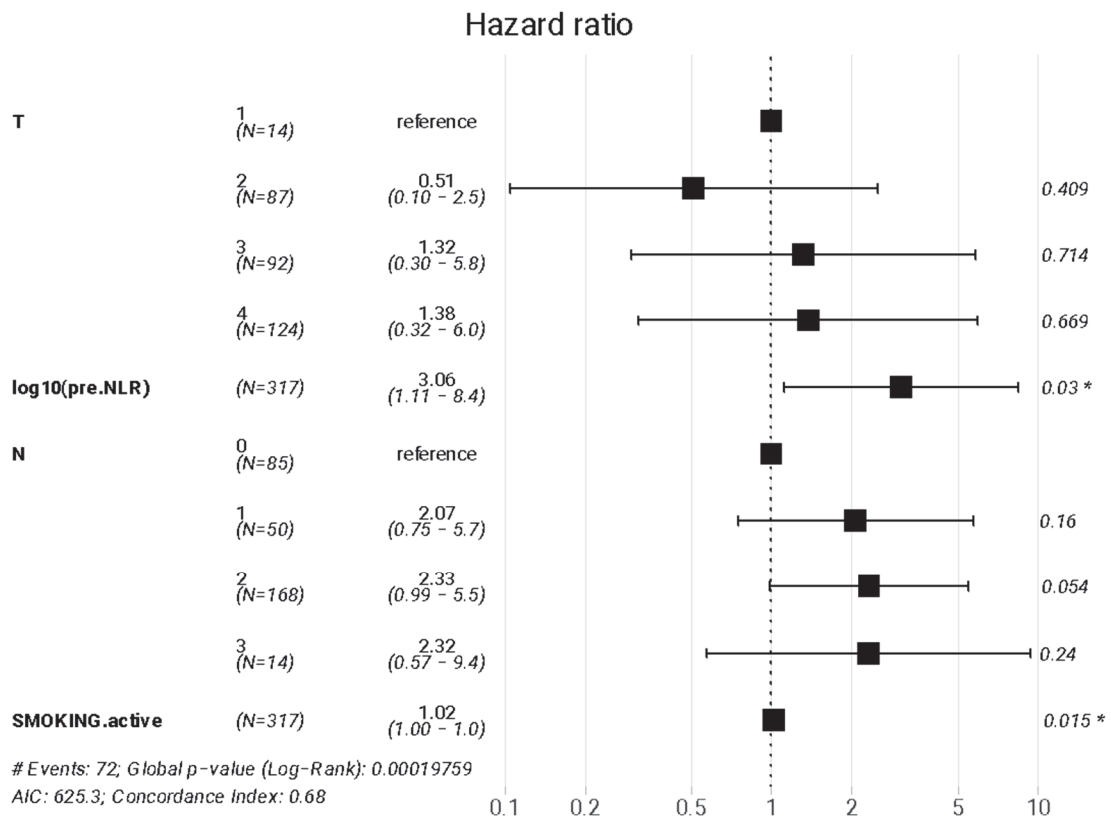


Figure S3. Multivariable Cox regression analysis of overall survival in oropharyngeal cancer subgroup. Asterisk marks p values < 0.05