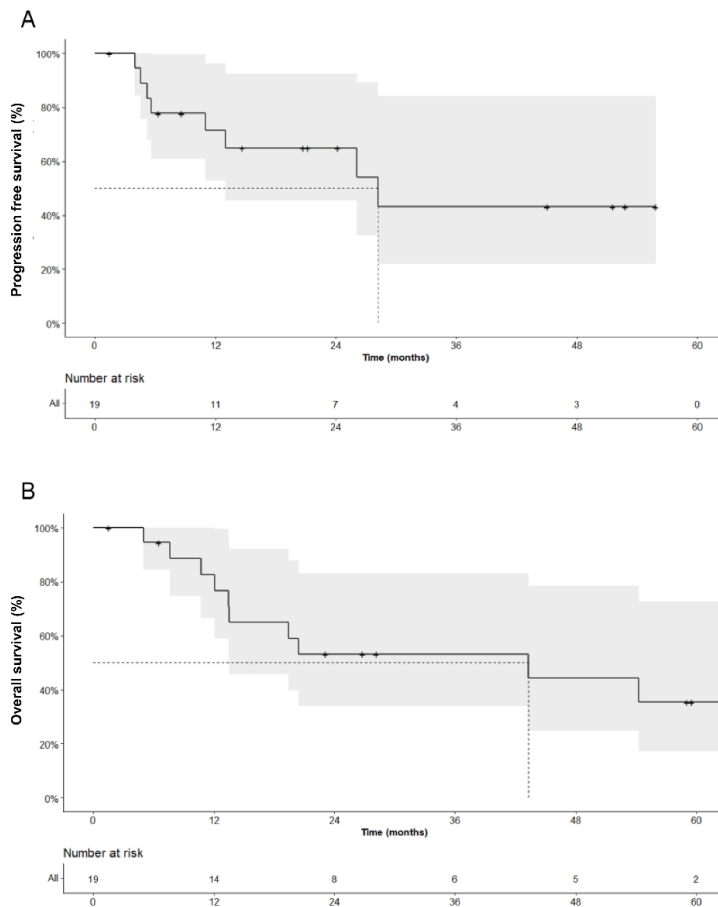


**Table S1** Chemotherapy regimen used in concurrent chemoradiotherapy

Chemotherapy regimen	No. of patients (%)
Cisplatin	2 (28.6)
Cisplatin/Docetaxel	2 (28.6)
Cisplatin/Paclitaxel	1 (14.3)
Carboplatin/Paclitaxel	2 (28.6)

**Table S2** Reasons for ineligibility for surgical treatment in 14 patients with tracheobronchial squamous cell carcinoma

Reason for ineligibility	No. of patients (%)
<b>Disease factors</b>	
Lengthy tracheal tumor not amenable to tension-free anastomosis	2 (14.3)
Primary tumor invading adjacent organ	1 (7.1)
Involvement of multiple lymph node	4 (28.6)
Distant metastasis at diagnosis	2 (14.3)
<b>Patient factors</b>	
Prior history of mediastinal surgery or irradiation	3 (21.4)
Patient refusal	2 (14.3)



**Figure S1** Kaplan-Meier curves for survival outcomes in patients with tracheobronchial squamous cell carcinoma. (A) Progression-free survival. (B) Overall survival.

**Table S3** Univariate analyses of variables influencing progression-free survival and overall survival in patients with tracheobronchial squamous cell carcinoma (n=19)

Variable	Progression-free survival		Overall survival		Reference
	HR (95% CI)	p value	HR (95% CI)	p value	
Age	0.97 (0.90–1.04)	0.35	0.99 (0.94–1.05)	0.72	[Continuous]
Sex, Male	0.99 (0.24–4.03)	0.99	0.61 (0.17–2.11)	0.43	Female
Location, Thoracic	0.72 (0.28–1.84)	0.50	1.62 (0.47–5.57)	0.45	Cervical
MB involvement, Yes	2.35 (0.27–20.29)	0.44	1.58 (0.19–12.94)	0.67	No
Transverse size	1.88 (1.15–3.09)	0.01*	1.75 (1.14–2.68)	0.01*	[Continuous]
Longitudinal size	1.72 (0.98–3.02)	0.06	1.71 (1.05–2.80)	0.03*	[Continuous]
cT stage, cT3-4	2.63 (0.62–11.16)	0.19	3.44 (0.88–13.43)	0.08	cT1-2
cN stage, cN1	0.54 (0.11–2.69)	0.45	0.64 (0.16–2.50)	0.52	cN0
cM stage, cM1	4.69 (1.08–20.37)	0.04*	2.35 (0.57–9.69)	0.24	cM0
Surgery, Yes	0.71 (0.14–3.52)	0.67	0.47 (0.10–2.20)	0.34	No
Treatment, RT alone	2.98 (0.74–12.08)	0.13	5.29 (1.47–18.99)	0.01*	CCRT or Surgery
RT Dose (Gy)	0.93 (0.86–0.99)	0.03*	0.92 (0.86–0.98)	0.02*	[Continuous]
Stent insertion	22.16 (2.49–197.08)	0.005*	12.42 (2.27–67.78)	0.004*	No

Abbreviation: HR, Hazard ratio; CI, Confidence interval; MB, Main bronchus; RT, Radiotherapy; CCRT, Concurrent chemoradiotherapy. \*, P<0.05.

**Table S4** Tumor response three months after curative radiotherapy to trachea

Response	No. of patients with response	
	RT alone	CCRT
Complete response	2	2
Partial response	3	5
Stable disease	1	0
Progressive disease	0	0
Not available	1	0
Objective response (CR+PR)*	5/6	7/7

Abbreviations: RT, Radiotherapy; CCRT, Concurrent chemoradiotherapy; CR, Complete response; PR, Partial response. \*(The number of patients who achieved CR or PR / The number of patients who underwent response evaluation) at the three months after definitive radiotherapy with or without concurrent chemotherapy.

**Table S5** Summary of studies on patients with tracheobronchial squamous cell carcinoma treated with concurrent chemoradiotherapy

First author (publication year)	No. of patients (SCC/total)	Median radiation dose, Gy (range)	No. of patients with CCRT	Oncologic outcomes with CCRT
OURS	19/19	RT: 60 (30-68.4) CCRT: 66 (45-66)	Total: 7 SCC: 7	Among 12 patients with curative aim of RT Median OS: NR (CCRT) vs. 17 months (RT alone) 4-yr OS rate: 55.6% (CCRT) vs. 25.0% (RT alone)
<i>National Cancer Database study</i>				
Harach (2020)	532/532	45% of patients receiving $\geq 60$ Gy	139	Median OS: 26 months (CCRT) vs. 16 months (RT alone) CS, CS+AT, and CCRT associated with largest reductions in HR of about 52% to 58%
<i>Hospital data-based study</i>				
Zeng (2021)	18/32	67.5 (60-70)	Total: 7 SCC: 6	Among six patients with SCC treated with CCRT <ul style="list-style-type: none"> <li>• CR+PR (3 months after CCRT): all patients</li> <li>• Local progression: 3 patients</li> <li>• Distant metastasis: 2 patients</li> </ul>
Jiang (2020)	20/49 <sup>*</sup>	N/A	Total: 8 SCC: N/A	No survival outcome analysis for patients with CCRT
Joshi (2014)	3/9	Range: 60-64	Total: 3 SCC: N/A	Median OS for patients with CCRT: NR (median follow-up period: 28 months)
Hentel (2010)	24/50	64 (56-70)	Total: 4 SCC: N/A	5-yr OS rate: 66% (OP + RT), 16% (RT alone), 0% (CCRT)
<i>Case-report</i>				
Kovacs (2021)	1/1	CCRT: 60	SCC: 1	No evidence of disease at 16 months after CCRT
Yathiraj (2017)	1/1	CCRT: 60	SCC: 1	No evidence of disease at 36 months after CCRT
Ahn (2016)	1/1	N/A	SCC: 1	No evidence of disease at 60 months after CCRT
Videtic (2003)	1/1	CCRT: 60	SCC: 1	No evidence of disease at 24 months after CCRT

Abbreviation: SCC, Squamous cell carcinoma; RT, Radiotherapy; CCRT, Concurrent chemoradiotherapy; OS, Overall survival; NR, Not reached; CS, Curative surgery; AT, Adjuvant treatment; CR, Complete response; PR, Partial response; N/A, Not available. \*Out of a total of 57 patients, 49 were diagnosed with malignant tumor.