Figure S1 Subgroup analyses of cancer-specific survival for patients with early glottic cancer before propensity score matching according to (A-C) T stage, (D,E) age, (F,G) pathological grade, and (H,I) sex. Dashed and solid lines indicate survival rates, with shaded areas indicating 95% CIs.
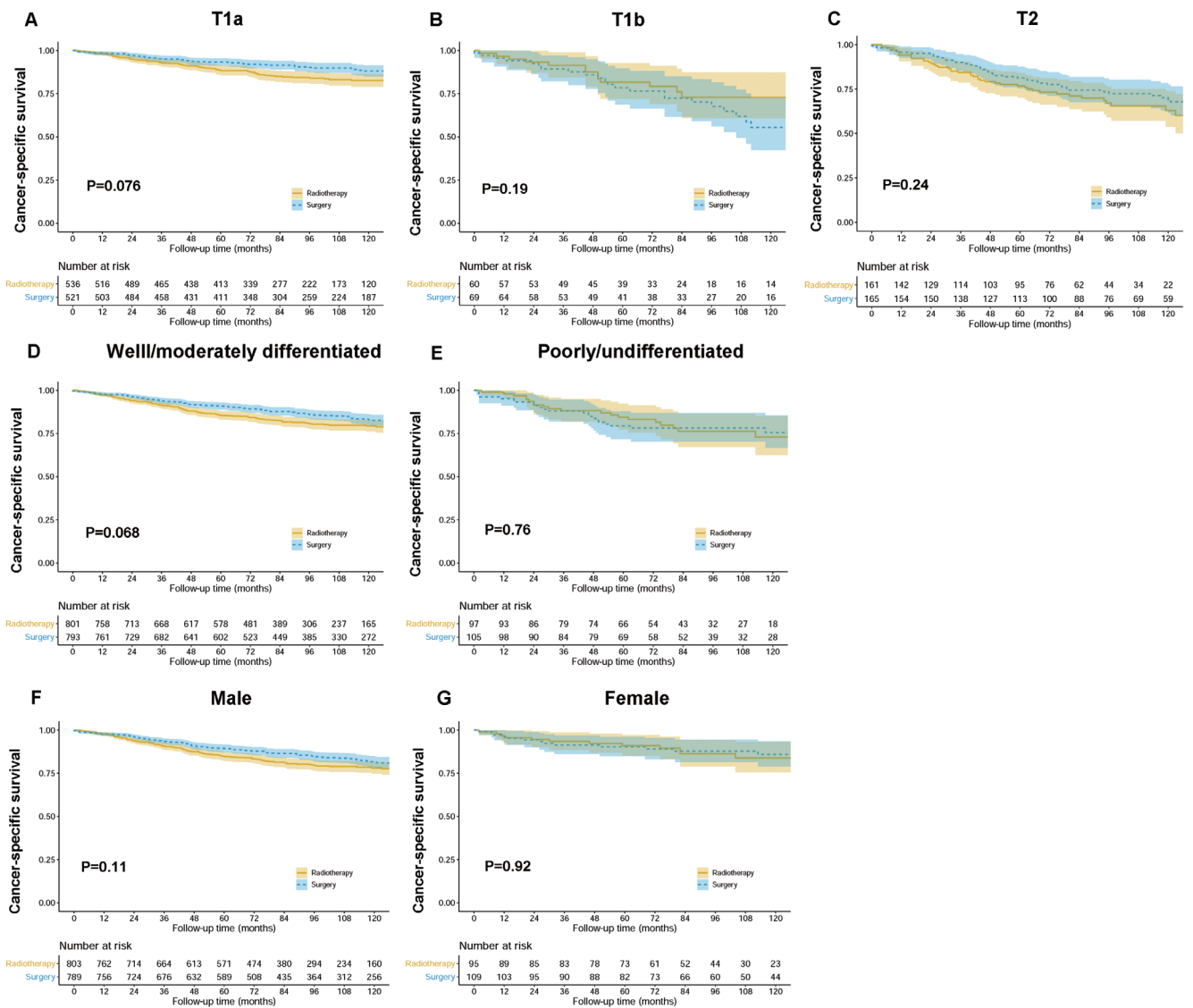
Figure S2 Survival analyses for patients with early glottic cancer stratified by (A-C) T stage, (D,E) pathological grade, and (F,G) sex after propensity score matching. Dashed and solid lines indicate survival rates, with shaded areas indicating 95% CIs.

Table S1 Univariate survival analysis for patients with early glottic cancer before propensity scores matching

Characteristic	Overall survival		Cancer-specific survival	
	HR (95% CI)	P value	HR (95% CI)	P value
Insurance status		0.67		0.61
Uninsured	Reference		Reference	
Insured	0.96 (0.45–2.05)	0.926	0.64 (0.26–1.57)	0.335
Unknown	1.03 (0.49–2.17)	0.937	0.68 (0.28–1.65)	0.395
Age		<0.001		<0.001
49 and below	Reference		Reference	
50–59	1.70 (1.33–2.18)	<0.001	1.46 (1.05–2.05)	0.023
60–69	2.91 (2.31–3.67)	<0.001	2.13 (1.56–2.91)	<0.001
70–79	4.31 (3.42–5.43)	<0.001	2.46 (1.78–3.38)	<0.001
80 and over	8.29 (6.50–10.6)	<0.001	3.72 (2.62–5.27)	<0.001
Sex: men *vs.* female	1.20 (1.03–1.39)	0.017	1.25 (0.98–1.59)	0.06
Race		0.079		0.005
Black	Reference		Reference	
White	0.94 (0.82–1.07)	0.359	0.71 (0.59–0.87)	0.001
Other	0.74 (0.56–0.97)	0.029	0.73 (0.49–1.07)	0.106
Marital status: married *vs.* single	0.71 (0.65–0.78)	<0.001	0.69 (0.60–0.79)	<0.001
Pathological grade		0.005		0.004
Well	Reference		Reference	
Moderately	1.08 (0.98–1.20)	0.10	1.23 (1.04–1.44)	0.015
Poorly	1.27 (1.09–1.48)	0.002	1.51 (1.20–1.91)	0.001
Undifferentiated	1.79 (1.03–3.11)	0.038	1.82 (0.75–4.42)	0.187
T stage		<0.001		<0.001
T1a	Reference		Reference	
T1b	1.53 (1.32–1.76)	<0.001	2.23 (1.79–2.76)	<0.001
T1nos	1.02 (0.88–1.78)	0.786	1.08 (0.85–1.37)	0.534
T2	1.50 (1.35–1.67)	<0.001	2.33 (1.98–2.73)	<0.001
Diagnosis time: 2005–2009 *vs.* 2010–2015	1.03 (0.93–1.14)	0.56	1.17 (0.99–1.37)	0.06
Treatment		0.001		<0.001
Radiotherapy	Reference		Reference	
Surgery	0.84 (0.75–0.93)	0.001	0.72 (0.60–0.86)	<0.001

AHR, adjusted hazard ratio

Table S2 Multivariate survival analysis for patients with early glottic cancer before propensity scores matching

Characteristic	Overall survival		Cancer-specific survival	
	AHR (95% CI)	P value	AHR (95% CI)	P value
Insurance status				
Uninsured	Reference	0.231	Reference	0.306
Insured	0.62 (0.29–1.32)		0.53 (0.22–1.31)	
Unknown	0.69 (0.32–1.45)		0.58 (0.24–1.42)	
Age				
49 and below	Reference	<0.001	Reference	<0.001
50–59	1.68 (1.31–2.15)		1.42 (1.03–2.00)	
60–69	2.95 (2.34–3.71)		2.14 (1.56–2.93)	
70–79	4.44 (3.52–5.60)		2.58 (1.87–3.56)	
80 and over	8.63 (6.76–11.0)		3.97 (2.80–5.64)	
Sex: men *vs.* female	1.26 (1.08–1.48)	0.002	1.26 (0.98–1.61)	0.065
Race				
Black	Reference	0.017	Reference	0.022
White	0.89 (0.78–1.02)		0.76 (0.62–0.92)	
Other	0.67 (0.51–0.88)		0.75 (0.51–0.91)	
Marital status: married *vs.* single	0.71 (0.65–0.78)	<0.001	0.72 (0.62–0.83)	<0.001
Pathological grade				
Well	Reference	0.286	Reference	0.207
Moderately	1.01 (0.92–1.12)		1.09 (0.92–1.28)	
Poorly	1.15 (0.98–1.13)		1.28 (1.01–1.62)	
Undifferentiated	1.19 (0.68–2.06)		1.30 (0.53–3.17)	
T stage				
T1a	Reference	<0.001	Reference	<0.001
T1b	1.43 (1.24–1.65)		2.06 (1.65–2.56)	
T1nos	1.04 (0.90–1.20)		1.08 (0.85–1.37)	
T2	1.55 (1.39–1.72)		2.27 (1.93–2.67)	
Diagnosis time: 2005–2009 *vs.* 2010–2015	1.01 (0.90–1.12)	0.859	1.11 (0.94–1.31)	0.20
Treatment				
Radiotherapy	Reference	0.015	Reference	0.009
Surgery	0.87 (0.78–0.97)		0.78 (0.65–0.94)	

AHR, adjusted hazard ratio.

Table S3 Univariate survival analysis for patients with early glottic cancer after propensity scores matching

Characteristic	Overall survival		Cancer-specific survival	
	AHR (95% CI)	P value	AHR (95% CI)	P value
Insurance status		0.475		0.998
Uninsured	Reference		Reference	
Insured	0.71 (0.22–2.23)	0.553	1.03 (0.12–7.50)	0.975
Unknown	0.81 (0.26–2.51)	0.710	1.02 (0.14–7.29)	0.983
Age		<0.001		<0.001
49 and below	Reference		Reference	
50–59	2.54 (1.69–3.83)	<0.001	2.44 (1.33–4.45)	0.004
60–69	4.30 (2.91–6.34)	<0.001	3.36 (1.89–5.98)	<0.001
70–79	6.17 (4.17–9.14)	<0.001	4.04 (2.45–7.27)	<0.001
80 and over	11.6 (7.72–17.3)	<0.001	6.44 (3.48–11.9)	<0.001
Sex: men *vs.* female	1.19 (0.95–1.48)	0.11	1.43 (0.96–2.12)	0.06
Race		0.30		0.06
black	Reference		Reference	
white	0.87 (0.70–1.09)	0.252	0.65 (0.47–0.91)	0.01
Other	0.74 (0.50–1.10)	0.138	0.68 (0.38–1.24)	0.21
Marital status: married *vs.* single	0.73 (0.64–0.84)	<0.001	0.72 (0.57–0.90)	0.005
Pathological grade		0.04		0.02
well	Reference		Reference	
moderately	1.11 (0.95–1.29)	0.174	1.32 (1.01–1.71)	0.038
Poorly	1.36 (1.08–1.71)	0.009	1.71 (1.18–2.49)	0.004
Undifferentiated	1.83 (0.86–3.88)	0.114	2.29 (0.72–7.25)	0.159
T stage		<0.001		<0.001
T1a	Reference		Reference	
T1b	1.83 (1.45–2.30)	<0.001	2.69 (1.89–3.83)	<0.001
T1nos	1.03 (0.84–1.26)	0.774	1.12 (0.78–1.59)	0.529
T2	1.45 (1.22–1.73)	<0.001	2.46 (1.89–3.21)	<0.001
Diagnosis time: 2005–2009 *vs.* 2010–2015	1.07 (0.92–1.24)	0.371	1.43 (1.11–1.84)	0.005
Treatment		0.21		0.126
Radiotherapy	Reference		Reference	
Surgery	0.92 (0.80–1.05)	0.21	0.84 (0.67–1.05)	0.126

AHR, adjusted hazard ratio

Table S4 Univariate survival analysis for patients aged 70 years and older with early glottic cancer after propensity scores matching

Characteristic	Overall survival		Cancer-specific survival	
	AHR (95% CI)	P value	AHR (95% CI)	P value
Insurance status	1.27 (0.93–1.75)	0.126	0.89 (0.56–1.42)	0.64
Unknown *vs.* insured				
Age				
80 and over *vs.* 70–79	1.90 (1.55–2.32)	<0.001	1.56 (1.09–2.23)	0.015
Sex: men *vs.* female	1.08 (0.80–1.47)	0.596	0.98 (0.59–1.64)	0.95
Race		0.435		0.378
Black	Reference		Reference	
White	1.06 (0.74–1.52)	0.735	0.68 (0.40–1.17)	0.166
Other	0.79 (0.44–1.41)	0.424	0.84 (0.36–1.98)	0.692
Marital status: married *vs.* single	0.76 (0.62–0.94)	0.01	0.75 (0.53–1.07)	0.12
Pathological grade		0.63		0.44
well	Reference		Reference	
moderately	1.02 (0.83–1.27)	0.829	1.35 (0.91–2.00)	0.132
Poorly	1.18 (0.83–1.67)	0.345	1.34 (0.71–2.52)	0.371
Undifferentiated	1.54 (0.68–3.50)	0.297	1.83 (0.44–7.58)	0.401
T stage		0.05		0.001
T1a	Reference		Reference	
T1b	1.55 (1.12–2.14)	0.009	2.26 (1.34–3.82)	0.002
T1nos	1.16 (0.87–1.55)	0.304	1.45 (0.87–2.40)	0.147
T2	1.21 (0.92–1.61)	0.176	2.15 (1.40–3.34)	0.001
Diagnosis time: 2005–2009 *vs.* 2010–2015	1.05 (0.85–1.30)	0.62	1.45 (0.98–2.12)	0.06
Treatment		0.123		0.009
Radiotherapy	Reference		Reference	
Surgery	0.86 (0.71–1.04)	0.123	0.63 (0.45–0.89)	0.009

AHR, adjusted hazard ratio