

Table S1 Patients' demographic and clinical characteristics by stage and type of therapy

Characteristics	Patient cohort clinical early-stage NSCLC (n=9,536)			
	Stage I radiotherapy (n=4,010)	Stage I surgery (n=3,445)	Stage II radiotherapy (n=753)	Stage II surgery (n=1,328)
Age (years)				
0–60	440 (11%)	866 (25%)	54 (7%)	286 (22%)
61–70	1,192 (30%)	1,457 (42%)	175 (23%)	525 (40%)
71–80	1,693 (42%)	1,040 (30%)	325 (43%)	451 (34%)
80+	685 (17%)	82 (2%)	199 (26%)	66 (5%)
Gender				
Male	2,131 (53%)	1,629 (47%)	498 (66%)	736 (55%)
Female	1,879 (47%)	1,816 (53%)	255 (34%)	592 (45%)
Socioeconomic status				
1–4 (low)	2,284 (57%)	1,923 (56%)	408 (54%)	720 (54%)
5–7 (mid)	919 (23%)	833 (24%)	194 (26%)	309 (23%)
8–10 (high)	807 (20%)	689 (20%)	151 (20%)	299 (23%)
History of other cancer				
Yes	774 (19%)	574 (17%)	115 (15%)	172 (13%)
No	3,236 (81%)	2,871 (83%)	638 (85%)	1,156 (87%)
Year of diagnosis				
2014	478 (12%)	417 (12%)	70 (9%)	148 (11%)
2015–2016	1,389 (35%)	1,217 (35%)	265 (35%)	482 (36%)
2017–2019	2,143 (53%)	1,811 (53%)	418 (56%)	698 (53%)
Clinical stage I				
IA	1,464 (37%)	1,066 (31%)	–	–
IA1	283 (7%)	178 (5%)		
IA2	945 (24%)	727 (21%)		
IA3	550 (14%)	483 (14%)		
IB	767 (18%)	991 (29%)		
Clinical stage II				
IIA	–	–	237 (31%)	486 (37%)
IIB			522 (69%)	842 (73%)
Performance status				
0	624 (16%)	1,432 (42%)	76 (10%)	535 (40%)
1	1,161 (29%)	589 (17%)	277 (30%)	291 (22%)
2	561 (14%)	47 (1%)	133 (18%)	19 (1%)
3	114 (3%)	7 (0%)	36 (5%)	5 (0%)
4	9 (0%)	2 (0%)	1 (0%)	1 (0%)
Unknown	1,541 (38%)	1,368 (40%)	280 (37%)	477 (36%)
Histology				
Adenocarcinoma	902 (22%)	2,331 (68%)	194 (26%)	739 (56%)
Squamous cell	629 (16%)	869 (25%)	255 (34%)	461 (34%)
Large cell	202 (5%)	145 (4%)	75 (10%)	64 (5%)
Other*	2277 (57%)	100 (3%)	229 (30%)	64 (5%)
EUS				
Yes	118 (3%)	83 (2%)	32 (4%)	79 (6%)
No	3,892 (97%)	3,362 (98%)	721 (96%)	1,249 (94%)
EBUS				
Yes	476 (12%)	488 (14%)	184 (24%)	453 (34%)
No	3,534 (88%)	2,957 (86%)	569 (76%)	875 (66%)
Surgical exploration				
Yes	6 (0%)	2 (0%)	4 (1%)	–
No	4,004 (100%)	3,443 (100%)	749 (99%)	1,328 (100%)
Transthoracic biopsy				
Yes	506 (13%)	613 (18%)	121 (16%)	238 (18%)
No	1,637 (41%)	1,198 (35%)	297 (40%)	460 (35%)
Unknown	1,867 (46%)	1,634 (47%)	335 (44%)	630 (47%)

NSCLC, non-small cell lung cancer; EUS, endoscopic ultra sound; EBUS, endo bronchial ultra sound.

Table S2 Multivariable Cox proportional hazards model (clinical stage I-II: radiotherapy, surgery): Adjusted hazard ratios [aHR (95% CI)] for mortality associated with time-to-treatment

Characteristics	Stage I radiotherapy (N=3,989)		Stage I surgery (N=3,438)		Stage II radiotherapy (N=747)		Stage II surgery (N=1,325)	
	aHR (95% CI)	P value	aHR (95% CI)	P value	aHR (95% CI)	P value	aHR (95% CI)	P value
Time-to-treatment								
0–33 (Q1)	Ref	–	Ref	–	Ref	–	Ref	–
33–47 (Q2)	1.02 (0.87–1.20)	0.7972	1.08 (0.88–1.33)	0.4414	1.03 (0.76–1.40)	0.8297	1.32 (1.02–1.70)	0.0337
48–64 (Q3)	1.07 (0.90–1.26)	0.4528	0.99 (0.79–1.24)	0.9425	0.87 (0.65–1.18)	0.3817	1.39 (1.05–1.85)	0.0222
>64 (Q4)	1.12 (0.96–1.31)	0.1523	1.03 (0.81–1.31)	0.807	0.87 (0.65–1.17)	0.3603	1.41 (1.04–1.92)	0.0273
Gender								
Male	Ref	–	Ref	–			Ref	–
Female	0.78 (0.70–0.87)	<0.0001	0.79 (0.67–0.93)	0.004			0.78 (0.63–0.95)	0.0159
Age (years)								
18–60	Ref	–	Ref	–	Ref	–		
61–70	1.17 (0.95–1.45)	0.1353	1.10 (0.88–1.38)	0.4018	2.16 (1.29–3.62)	0.0036		
71–80	1.47 (1.20–1.79)	0.0002	1.57 (1.25–1.97)	0.0001	2.23 (1.35–3.67)	0.0017		
80+	1.82 (1.47–2.27)	<0.0001	1.90 (1.22–2.95)	0.0043	2.65 (1.59–4.42)	0.0002		
History of other cancer								
No	Ref	–	Ref	–				
Yes	1.16 (1.01–1.32)	0.0343	1.49 (1.23–1.82)	<0.0001				
Socioeconomic status								
1–3	Ref	–	Ref	–				
4–7	0.87 (0.76–0.98)	0.0272	0.88 (0.73–1.06)	0.1692				
8–10	0.84 (0.73–0.96)	0.0092	0.78 (0.63–0.96)	0.0189				
Incidence year								
2014							Ref	–
2015–2016							0.82 (0.61–1.10)	0.183
2017+							0.61 (0.43–0.86)	0.0052
Performance status								
0	Ref	–	Ref	–	Ref	–	Ref	–
1	1.44 (1.18–1.75)	0.0004	1.18 (0.92–1.52)	0.1966	1.23 (0.81–1.87)	0.3289	1.39 (1.05–1.85)	0.0209
2	1.99 (1.60–2.47)	<0.0001	1.95 (1.03–3.70)	0.0418	2.04 (1.32–3.16)	0.0013	1.10 (0.45–2.71)	0.8285
3+4	2.70 (1.97–3.68)	<0.0001	3.90 (1.44–10.60)	0.0076	3.51 (2.02–6.08)	<0.0001	2.44 (0.77–7.70)	0.1289
9	1.55 (1.29–1.86)	<0.0001	1.15 (0.96–1.39)	0.1229	1.51 (1.01–2.26)	0.0433	1.26 (0.97–1.64)	0.0865
Clinical stage (I)								
IA	Ref	–	Ref	–				
IB	1.45 (1.28–1.63)	<0.0001	1.76 (1.49–2.08)	<0.0001				
Histology								
Adenocarcinoma			Ref	–				
Squamous			1.17 (0.97–1.40)	0.0935				
Large cell			1.67 (1.20–2.34)	0.0024				
Other*			1.65 (1.08–2.52)	0.0209				

*, Other: rare histological subtypes. aHR, adjusted hazard ratio; CI, confidence interval.