Supplementary Materials

CONTENTS

Supplementary Tables

Supplementary Figures

Supplementary Table

Supplementary Table 1. Surgery Procedure at Initial Diagnosis of Lung Cancer in SEER (N=138,969)

Surgical Procedures	Case (%)
Local surgical excision or destruction of legion	756 (0.54)
Partial/wedge/segmental resection, partial lobectomy, sleeve resection	24639 (17.72)
Lobectomy/bilobectomy without dissection of lymph nodes	101,544 (73.07)
Lobectomy/bilobectomy with dissection of lymph nodes	6,266 (4.51)
Complete/total/standard pneumonectomy	4,549 (3.27)
Radical pneumonectomy	54 (0.03)
Extended radical pneumonectomy	196 (0.14)
Surgery of regional and/or distant site/node(s)	315 (0.22)
Resection of lung/Not otherwise specified	650 (0.47)

Supplementary Table 2. Multivariable Cox Regression for Evaluating an Association between Overall Survival and SPLC diagnosis (versus Single Primary Lung Cancer) in SEER

Characteristics	Adjusted Hazard Ratio (95% CI)
SPLC[a]	
No: Single Primary Lung Cancer	Reference
Yes	2.12 (2.06 to 2.17)
Age at IPLC diagnosis	1.03 (1.03 to 1.03)
Sex	
Female	Reference
Male	1.37 (1.35 to 1.39)
Stage at IPLC[b]	
Early	Reference
Advanced	2.31 (2.23 to 2.40)
Histology of IPLC	
Adenocarcinoma	Reference
Large cell	1.38 (1.33 to 1.43)
Squamous cell	1.25 (1.23 to 1.27)
Small cell	1.85 (1.75 to 1.97)
Non-small cell carcinoma/NOS	1.30 (1.26 to 1.35)
Others	0.83 (0.81 to 0.86)
Race	
African American	1.10 (1.07 to 1.13)
Asian/Pacific Islander	0.84 (0.82 to 0.87)
Hispanic	0.93 (0.90 to 0.96)
Other	1.14 (1.02 to 1.27)
White	Reference

[a]Time-varying predictor for overall survival. IPLC = initial primary lung cancer; NOS = not otherwise specified; SEER = Surveillance, Epidemiology, and End Results Program; SPLC = second primary lung cancer.
[b]Stage of IPLC was defined using SEER summary stage 2000: 'localized' and 'regional' for early stage and 'distant' for advanced stage.

Supplementary Table 3. Multivariate Cox Regression for Evaluating an Association between Lung Cancer-Specific Survival and SPLC diagnosis in SEER

Characteristics	Adjusted Hazard Ratio (95% CI)
SPLC[a]	
No: Single Primary Lung Cancer	Reference
Yes	3.20 (3.10 to 3.30)
Age at IPLC diagnosis	1.01 (1.01 to 1.02)
Sex	
Female	Reference
Male	1.35 (1.33 to 1.37)
Stage at IPLC[b]	
Early	Reference
Advanced	2.81 (2.70 to 2.93)
Histology of IPLC	
Adenocarcinoma	Reference
Large cell	1.39 (1.33 to 1.46)
Squamous cell	1.13 (1.11 to 1.15)
Small cell	2.05 (1.92 to 2.20)
Non-small cell carcinoma/NOS	1.31 (1.25 to 1.36)
Others	0.69 (0.67 to 0.72)
Race	
African American	1.08 (1.04 to 1.11)
Asian/Pacific Islander	0.94 (0.90 to 0.97)
Hispanic	0.96 (0.92 to 1.01)
Other	1.19 (1.03 to 1.36)
White	Reference

[a]Time-varying predictor for overall survival. IPLC = initial primary lung cancer; NOS = not otherwise specified; SEER = Surveillance, Epidemiology, and End Results Program; SPLC = second primary lung cancer.
[b]Stage of IPLC was defined using SEER summary stage 2000: 'localized' and 'regional' for early stage and 'distant' for advanced stage.

Supplementary Table 4. Evaluation of an association between SPLC and Lung Cancer-Specific Survival Stratified by Subgroups for Assessing Effect Modification (i.e., Interaction)

Data source and Subgroup	Case	aHR of SPLC[a] (95% CI)	$P_{interaction}$[c]
SEER			
Stage at IPLC[b]			
Early	133,445	3.28 (3.18 to 3.38)	<.001
Advanced	5,524	1.55 (1.25 to 1.90)	
Age at IPLC diagnosis			
0-49 y	7,986	3.92 (3.32 to 4.62)	<.001
50-59 y	22,608	3.82 (3.52 to 4.14)	
60-69 y	45,396	3.36 (3.20 to 3.53)	
70-79 y	48,391	2.99 (2.85 to 3.15)	
80+ y	14,588	2.37 (2.12 to 2.64)	
Histology of IPLC			
Small cell	1,970	1.70 (1.29 to 2.24)	<.001
Large cell	4,911	2.42 (2.09 to 2.80)	
Adenocarcinoma	75,738	3.03 (2.90 to 3.16)	
Squamous cell	35,666	3.46 (3.28 to 3.65)	
Non-small cell carcinoma/NOS	5,721	2.94 (2.58 to 3.36)	
Others	14,963	3.99 (3.55 to 4.48)	
MEC			
Smoking Status[d]			
Former/Never	983	1.58 (0.99 to 2.50)	0.01
Current	557	3.14 (1.83 to 5.36)	

[a]Time-varying predictor for overall survival. aHR, adjusted hazard ratio; IPLC, initial primary lung cancer; NOS, not otherwise specified; SEER, Surveillance, Epidemiology, and End Results Program; SPLC, second primary lung cancer.

[b]Stage of IPLC was defined using SEER summary stage 2000: 'localized' and 'regional' for early stage and 'distant' for advanced stage.

[c]2-sided likelihood ratio test comparing models with and without interaction with SPLC.

[d]Assessment of smoking status was collected at baseline, and updated using 10-year follow-up, if prior to IPLC diagnosis.

Supplementary Table 5. Sensitivity Analysis for Evaluation of an Association between SPLC and Survival Stratified by Subgroups for Assessing Effect Modification after Excluding Patients with Advanced-Stage IPLC (N=133,445 in SEER; N=1,050 in the MEC)

Data Source and Subgroup	Case	aHR of SPLC[a] (95% CI)	$P_{interaction}$[c]
Overall survival			
SEER			
Stage at IPLC[b]			
Localized	76,452	2.39 (2.31 to 2.47)	<.001
Regional	56,993	1.86 (1.78 to 1.94)	
Age at IPLC diagnosis			
0-49 y	7,421	3.39 (2.80 to 3.89)	<.001
50-59 y	21,375	2.90 (2.70 to 3.12)	
60-69 y	43,579	2.40 (2.30 to 2.50)	
70-79 y	46,852	1.98 (1.89 to 2.06)	
80+ y	14,218	1.50 (1.36 to 1.65)	
Histology of IPLC			
Small cell	1,874	1.56 (1.25 to 1.95)	<.001
Large cell	4,626	1.90 (1.67 to 2.16)	
Adenocarcinoma	72,896	2.12 (2.04 to 2.20)	
Squamous cell	34,446	2.22 (2.12 to 2.33)	
Non-small cell carcinoma/NOS	5,329	2.08 (1.84 to 2.35)	
Others	14,274	2.46 (2.22 to 2.73)	
MEC			
Smoking Status[d]			
Former/Never	893	1.52 (1.05 to 2.16)	0.18
Current	157	2.30 (1.46 to 3.64)	
Lung cancer-specific survival			
SEER			
Stage at IPLC[b]			
Localized	76,452	4.30 (4.14 to 4.47)	<.001
Regional	56,993	(2.31 to 2.55)	
Age at IPLC diagnosis			
0-49 y	7,421	4.23 (3.50 to 5.09)	<.001
50-59 y	21,375	4.10 (3.77 to 4.46)	
60-69 y	43,579	3.55 (3.38 to 3.74)	
70-79 y	46,852	3.17 (3.01 to 3.34)	
80+ y	14,218	2.43 (2.17 to 2.72)	
Histology of IPLC			
Small cell	1,874	1.90 (1.43 to 2.52)	<.001
Large cell	4,626	2.52 (2.16 to 2.93)	
Adenocarcinoma	72,896	3.20 (3.06 to 3.34)	
Squamous cell	34,446	3.65 (3.45 to 3.86)	
Non-small cell carcinoma/NOS	5,329	3.15 (2.74 to 3.62)	
Others	14,274	4.22 (3.72 to 4.79)	
MEC			
Smoking Status[d]			
Former/Never	893	1.74 (1.10 to 2.75)	0.07
Current	157	3.31 (1.89 to 5.81)	

[a]Time-varying predictor for overall survival. aHR, adjusted hazard ratio; IPLC, NOS, not otherwise specified; initial primary lung cancer; SEER, Surveillance, Epidemiology, and End Results Program; SPLC, second primary lung cancer.
[b]Stage of IPLC was defined using SEER summary stage 2000: 'localized' and 'regional' for early stage and 'distant' for advanced stage.

Supplementary Table 6. All Patients with Surgery for IPLC in MEC from 1993 to 2017, Stratified by SPLC versus Single Primary Lung Cancer

Characteristics	Total (N=1,540)	Patients with SPLC (n=123)	Patients with single primary lung cancer (n=1,417)
Age at IPLC diagnosis			
Mean (SD)	72.8 (7.6)	71.7 (7.7)	72.9 (7.6)
Age at IPLC diagnosis in groups, No. (%)			
<60 y	93 (6.0)	9 (7.3)	84 (5.9)
60-69 y	399 (25.9)	39 (31.7)	360 (25.4)
70-79 y	782 (50.8)	59 (48.0)	723 (51.0)
80+ y	266 (17.3)	16 (13.0)	250 (17.7)
Sex, No. (%)			
Male	775 (50.3)	61 (49.6)	714 (50.4)
Female	765 (49.7)	62 (50.4)	703 (49.6)
Race, No. (%)			
African American	373 (24.2)	24 (19.5)	349 (24.6)
Hispanic	226 (14.7)	16 (13.0)	210 (14.8)
Japanese American	377 (24.5)	32 (26.0)	345 (24.3)
Native Hawaiian	83 (5.4)	8 (6.5)	75 (5.3)
Other	86 (5.6)	6 (4.9)	80 (5.6)
White	474 (30.8)	37 (30.1)	358 (25.3)
Personal history of cancer, No. (%)			
Yes	474 (30.8)	42 (34.1)	432 (30.5)
No	1,066 (69.2)	81 (65.9)	985 (69.5)
Stage at IPLC[a], No. (%)			
Early	1,390 (90.3)	119 (96.7)	1,271 (89.7)
Advanced	150 (9.7)	4 (3.3)	146 (10.3)
Histology of IPLC, No. (%)			
Adenocarcinoma	936 (60.8)	76 (61.8)	860 (60.7)
Large cell	61 (4.0)	7 (5.7)	54 (3.8)
Squamous cell	15 (1.0)	31 (25.2)	319 (22.5)
Small cell	350 (22.7)	0 (0.0)	15 (1.1)
Non-small cell carcinoma/NOS	26 (1.7)	3 (2.4)	23 (1.6)
Others	152 (9.9)	6 (4.9)	146 (10.3)
Radiotherapy for IPLC, No. (%)			
Yes	215 (14.0)	11 (8.9)	204 (14.4)
No	1,313 (85.3)	112 (91.1)	1,201 (84.8)
Missing	12 (0.8)	0 (0.0)	12 (0.8)
Chemotherapy for IPLC, No. (%)			
Yes	257 (16.7)	8 (6.5)	249 (17.6)
No/Unknown	1283 (83.3)	115 (93.5)	1,168 (82.4)
Cause of Death, No. (%)			
Alive	618 (40.1)	47 (38.2)	571 (40.3)
Lung cancer	581 (37.7)	54 (43.9)	527 (37.2)
Other	341 (22.1)	22 (17.9)	319 (22.5)
Smoking status[b], No. (%)			
Never	233 (15.1)	11 (8.9)	222 (15.7)
Former	750 (48.7)	60 (48.8)	690 (48.7)
Current	557 (36.2)	52 (42.3)	505 (35.6)
Smoking intensity (Cigs/day)[b]			
Mean (SD)	15.0 (10.2)	18.4 (10.7)	14.7 (10.1)
Smoking pack-years[b]			
Mean (SD)	25.1 (19.9)	33.0 (21.3)	24.4 (19.6)
Smoking quit years[b]			
Mean (SD)	6.5 (7.6)	5.1 (7.1)	6.6 (7.7)

[a]Stage of IPLC was defined using SEER summary stage: 'localized' and 'regional' for early stage and 'distant' for advanced stage. IPLC, initial primary lung cancer; MEC, Multiethnic Cohort Study; NOS, not otherwise specified; SD, standard deviation; SPLC, second primary lung cancer.

[b]Assessment of smoking status was collected at baseline, and updated using 10-year follow-up, if prior to IPLC diagnosis.

Supplementary Table 7. Multivariable Cox Regression for Evaluating an Association between Overall Survival and SPLC diagnosis (versus Single Primary Lung Cancer) in the MEC

Characteristics	Adjusted Hazard Ratio (95% CI)
SPLC[a]	
No: Single Primary Lung Cancer	Reference
Yes	1.74 (1.31 to 2.28)
Age at IPLC diagnosis	1.03 (1.02 to 1.03)
Sex	
Female	Reference
Male	1.53 (1.33 to 1.76)
Stage at IPLC[b]	
Early	Reference
Advanced	3.06 (2.45 to 3.83)
Histology of IPLC	
Adenocarcinoma	Reference
Large cell	1.31 (0.85 to 2.03)
Squamous cell	1.08 (0.93 to 1.27)
Small cell	3.22 (1.47 to 7.06)
Non-small cell carcinoma/NOS	1.31 (0.80 to 2.15)
Others	0.87 (0.67 to 1.14)
Race	
African American	1.30 (1.08 to 1.56)
Hispanic	0.95 (0.75 to 1.20)
Japanese American	0.87 (0.71 to 1.05)
Native Hawaiian	0.78 (0.56 to 1.09)
Other	1.20 (0.89 to 1.63)
White	Reference

[a]Time-varying predictor for overall survival. IPLC, initial primary lung cancer; MEC, Multiethnic Cohort Study; NOS, not otherwise specified; SPLC, second primary lung cancer.
[b]Stage of IPLC was defined using SEER summary stage: 'localized' and 'regional' for early stage and 'distant' for advanced stage.

Supplementary Table 8. Multivariable Cox Regression for Evaluating an Association between Lung Cancer-Specific Survival and SPLC diagnosis (versus Single Primary Lung Cancer) in the MEC

Characteristics	Adjusted Hazard Ratio (95% CI)
SPLC[a]	
No: Single Primary Lung Cancer	Reference
Yes	2.18 (1.56 to 3.05)
Age at IPLC diagnosis	1.01 (1.00 to 1.02)
Sex	
Female	Reference
Male	1.51 (1.27 to 1.81)
Stage at IPLC[b]	
Early	Reference
Advanced	3.43 (2.62 to 4.49)
Histology of IPLC	
Adenocarcinoma	Reference
Large cell	1.46 (0.92 to 2.33)
Squamous cell	1.00 (0.81 to 1.23)
Small cell	3.82 (1.71 to 8.49)
Non-small cell carcinoma/NOS	1.41 (0.85 to 2.32)
Others	0.92 (0.66 to 1.28)
Race	
African American	1.24 (0.98 to 1.58)
Hispanic	0.96 (0.71 to 1.29)
Japanese American	0.87 (0.68 to 1.12)
Native Hawaiian	0.71 (0.46 to 1.09)
Other	1.26 (0.88 to 1.79)
White	Reference

[a]Time-varying predictor for overall survival. IPLC, initial primary lung cancer; MEC, Multiethnic Cohort Study; NOS, not otherwise specified; SPLC, second primary lung cancer.
[b]Stage of IPLC was defined using SEER summary stage: 'localized' and 'regional' for early stage and 'distant' for advanced stage.

Supplementary Table 9. Sensitivity Analysis for Evaluating an Association Between SPLC and Survival Stratified by Smoking-Related Subgroups for Assessing Effect Modification in the MEC

Outcome and Subgroup	Case	aHR of SPLC[a] (95% CI)	$P_{interaction}$[e]
Overall survival			
Smoking status[b]			
Never	233	1.28 (0.48 to 3.35)	0.13
Former	750	1.45 (0.99 to 2.14)	
Current	557	2.32 (1.49 to 3.61)	
Smoking pack-years[c]			
1st Tertile (1 to 17)	368	1.61 (0.87 to 2.98)	0.92
2nd Tertile (18 to 34)	476	1.94 (1.16 to 3.24)	
3rd Tertile (≧35)	418	1.60 (1.03 to 2.48)	
Smoking intensity (Cigs/Day)[c]			
1st Tertile (5 to 9)	327	1.65 (0.91 to 3.00)	0.20
2nd Tertile (10 to 19)	514	2.25 (1.29 to 3.93)	
3rd Tertile (≧20)	437	1.66 (1.08 to 2.56)	
Smoking quit years[d]			
1st Tertile (0.5 to 7)	192	1.46 (0.78 to 2.72)	0.38
2nd Tertile (8 to 14)	313	1.36 (0.74 to 2.47)	
3rd Tertile (≧15)	233	2.32 (1.06 to 5.11)	
Lung Cancer-Specific Survival			
Smoking status[b]			
Never	233	1.97 (0.73 to 5.31)	0.04
Former	750	1.52 (0.90 to 2.54)	
Current	557	3.14 (1.83 to 5.36)	
Smoking pack-years[c]			
1st Tertile (1 to 17)	368	2.08 (0.92 to 4.69)	0.68
2nd Tertile (18 to 34)	476	2.77 (1.52 to 5.07)	
3rd Tertile (≧35)	418	1.83 (1.04 to 3.21)	
Smoking intensity (Cigs/Day)[c]			
1st Tertile (5 to 9)	327	1.86 (0.80 to 4.34)	0.19
2nd Tertile (10 to 19)	514	3.38 (1.73 to 6.60)	
3rd Tertile (≧20)	437	2.13 (1.27 to 3.56)	
Smoking quit years[d]			
1st Tertile (0.5 to 7)	192	1.90 (0.86 to 4.17)	0.95
2nd Tertile (8 to 14)	313	1.54 (0.65 to 3.63)	
3rd Tertile (≧15)	233	1.42 (0.44 to 4.58)	

[a]Time-varying predictor for overall survival. aHR, adjusted hazard ratio; IPLC, initial primary lung cancer; MEC, the Multiethnic Cohort Study; NOS, not otherwise specified; SEER, Surveillance, Epidemiology, and End Results Program; SPLC, second primary lung cancer.

[b]Assessment of smoking status was collected at baseline, and updated using 10-year follow-up, if prior to IPLC diagnosis.
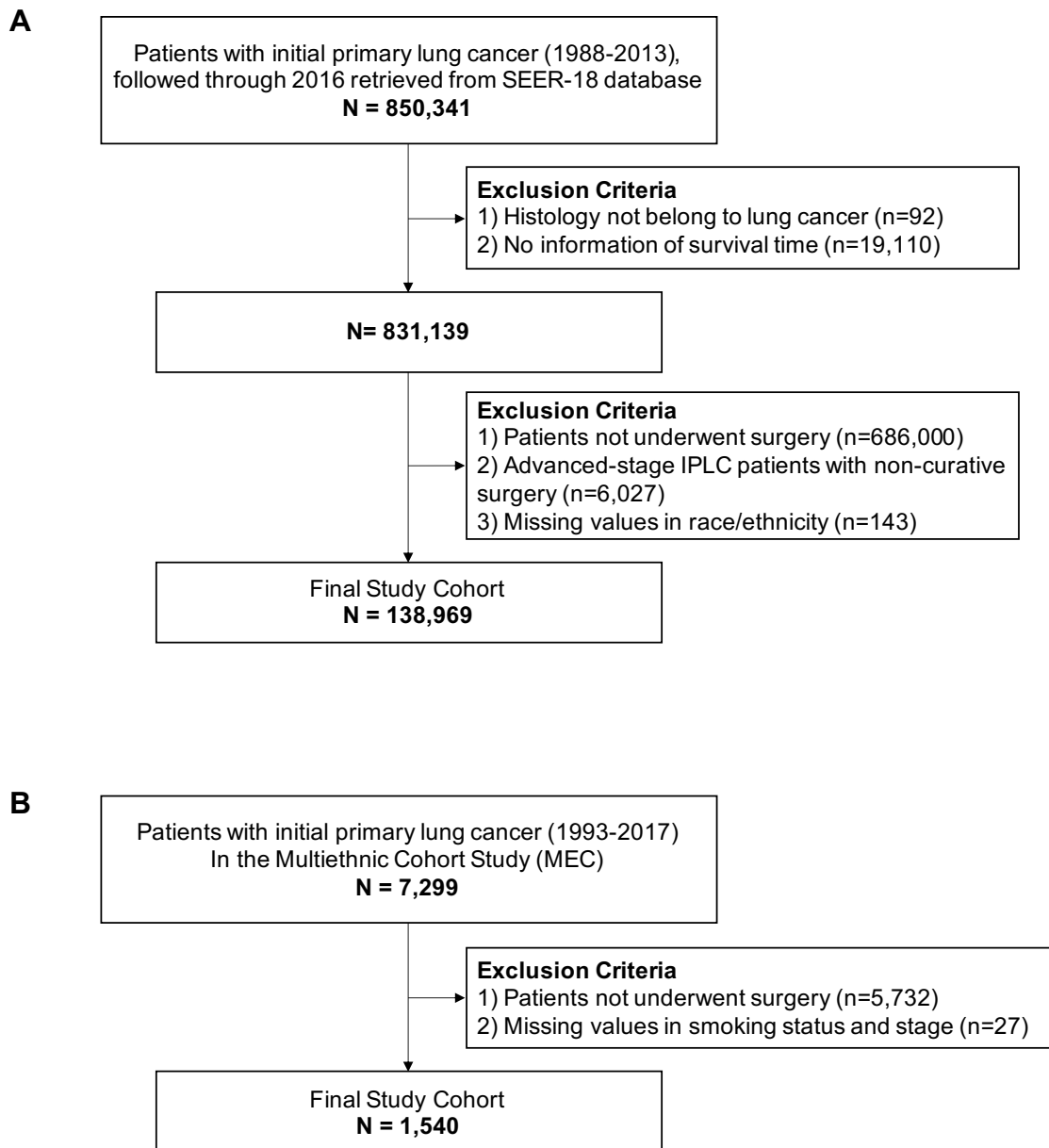
[c]Only among ever smokers at IPLC diagnosis (n=1,278).

[d]Only among former smokers at IPLC diagnosis (n=738).

[e]2-sided likelihood ratio test comparing models with and without interaction with SPLC.

Supplementary Figures

Supplementary Figure 1. Cohort Selection Criteria from the SEER database (Panel A) and MEC (Panel B). MEC = Multiethnic Cohort Study; SEER = Surveillance, Epidemiology, and End Results Program.

A

Patients with initial primary lung cancer (1988-2013), followed through 2016 retrieved from SEER-18 database
N = 850,341

Exclusion Criteria
1) Histology not belong to lung cancer (n=92)
2) No information of survival time (n=19,110)

N= 831,139

Exclusion Criteria
1) Patients not underwent surgery (n=686,000)
2) Advanced-stage IPLC patients with non-curative surgery (n=6,027)
3) Missing values in race/ethnicity (n=143)

Final Study Cohort
N = 138,969

B

Patients with initial primary lung cancer (1993-2017) In the Multiethnic Cohort Study (MEC)
N = 7,299

Exclusion Criteria
1) Patients not underwent surgery (n=5,732)
2) Missing values in smoking status and stage (n=27)

Final Study Cohort
N = 1,540

Supplementary Figure 2. Histogram for Time from IPLC to SPLC diagnosis in SEER. IPLC = initial primary lung cancer; SEER = Surveillance, Epidemiology, and End Results Program; SPLC = second primary lung cancer.
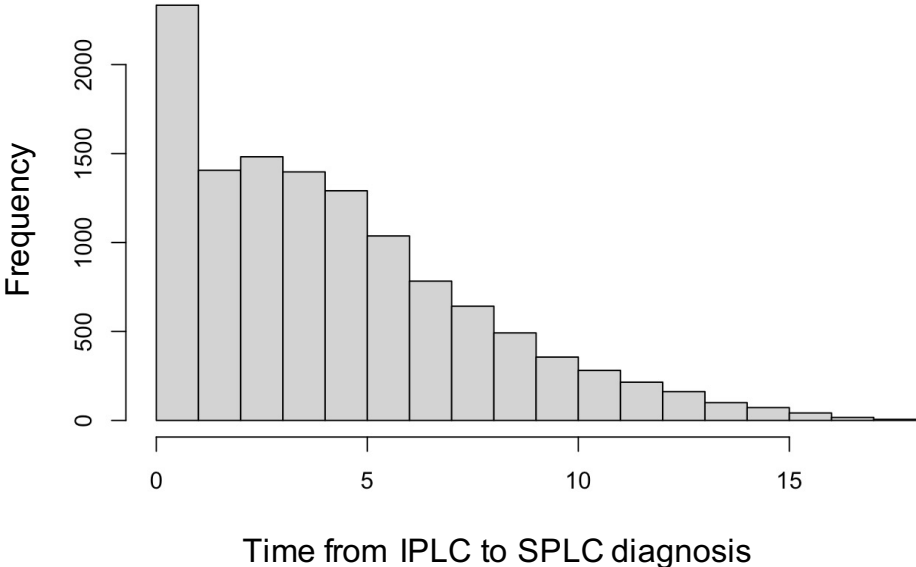
Supplementary Figure 3. Adjusted Survival Curves for Overall and Lung Cancer-Specific Mortality among Patients with SPLC versus Single Primary Lung Cancer in SEER. Overall mo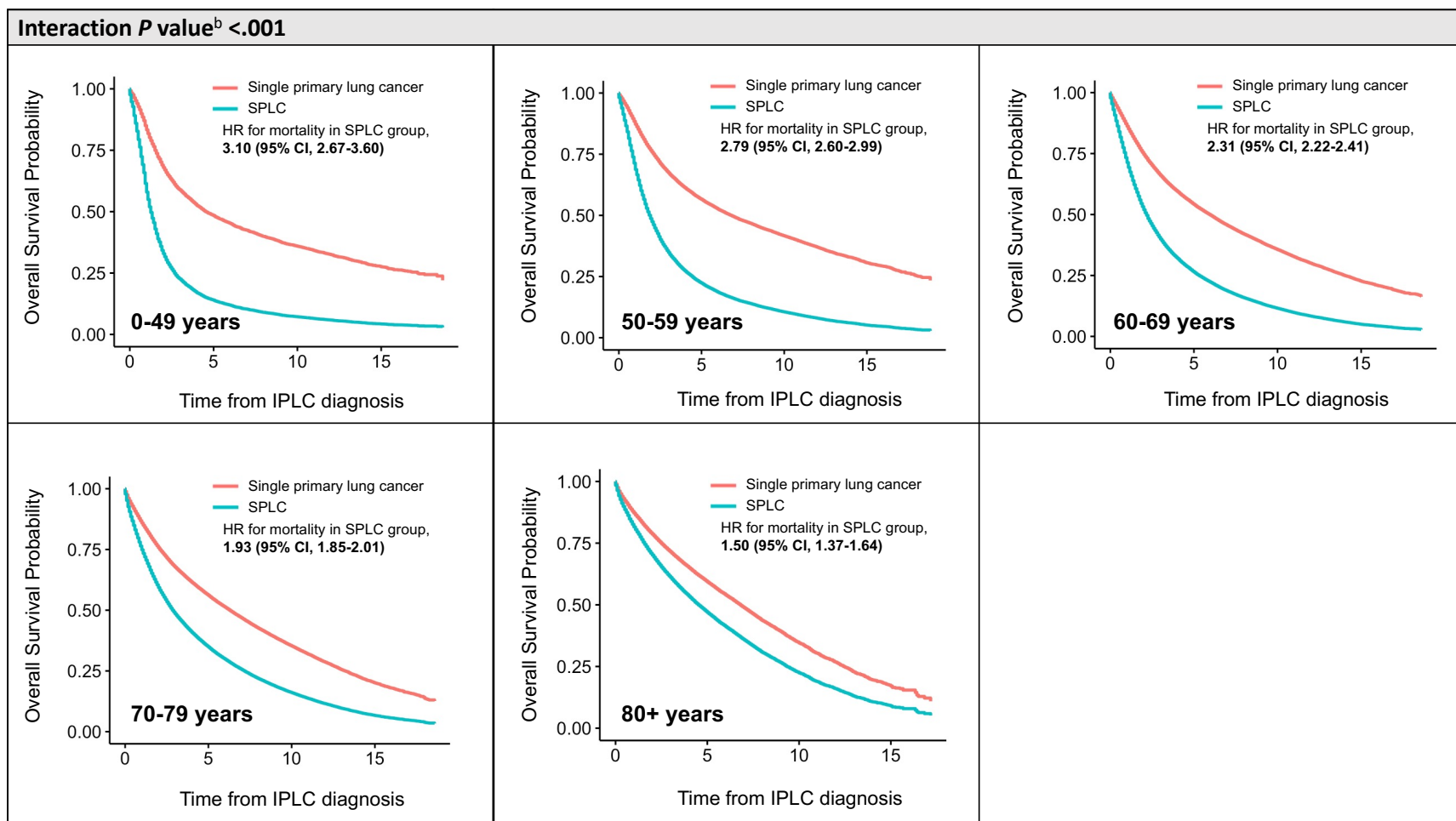rtality (A) and lung cancer-specific mortality (B) was estimated using multivariable Cox regression with time varying SPLC adjusting for sex, race, and age, stage and histology at IPLC. IPLC = initial primary lung cancer; SEER = Surveillance, Epidemiology, and End Results Program; SPLC = second primary lung cancer; CI = confidence interval; HR = adjusted hazard ratio

A

HR for mortality in SPLC group,
2.12 (95% CI, 2.06-2.17)

B

HR for LC-specific mortality in SPLC group,
3.20 (95% CI, 3.10-3.30)
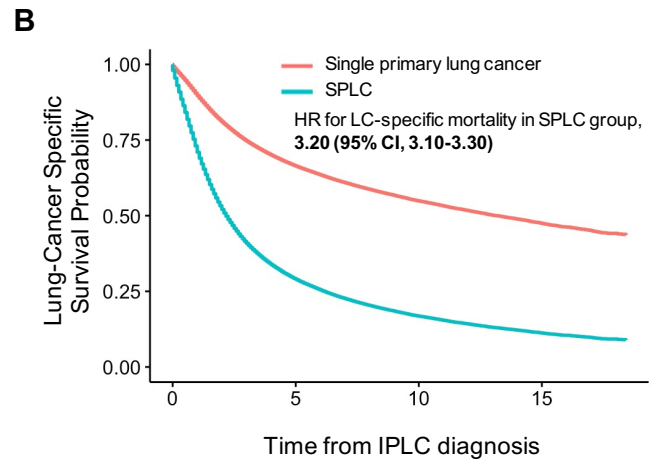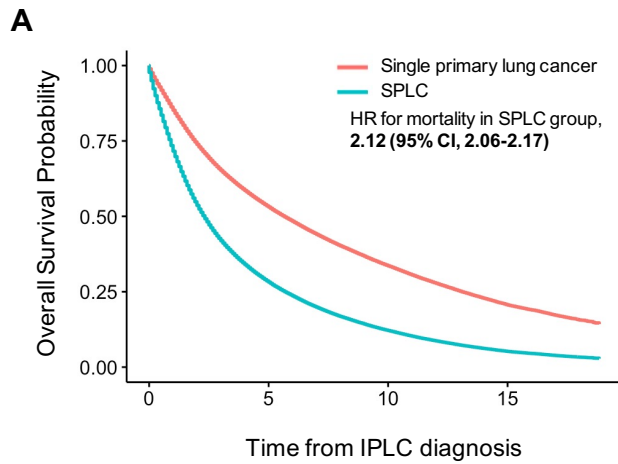
Supplementary Figure 4. Stratified Analysis by IPLC diagnosis age: Adjusted Survival Curves for Overall Mortality among Patients with SPLC[a] versus Single Primary Lung Cancer in SEER. [a]Overall mortality was estimated using multivariable Cox regression with time varying SPLC adjusting for sex, race, and age, stage and histology at IPLC. [b]Interaction was assessed between age group at IPLC diagnosis and SPLC diagnosis on overall survival using a 2-sided likelihood ratio test. CI = confidence interval; HR = adjusted hazard ratio; IPLC = initial primary lung cancer; SEER = Surveillance, Epidemiology, and End Results Program; SPLC = second primary lung cancer.
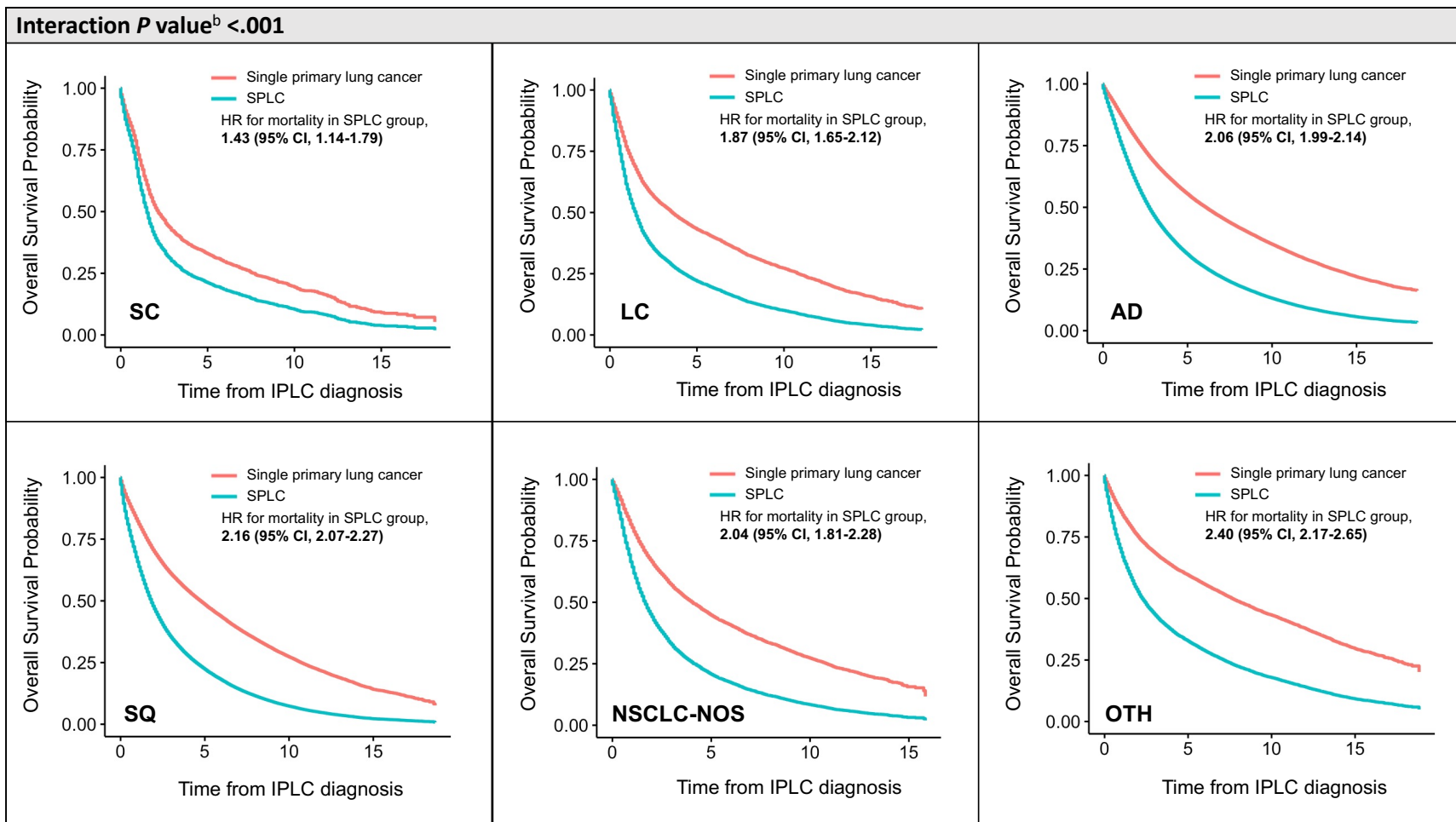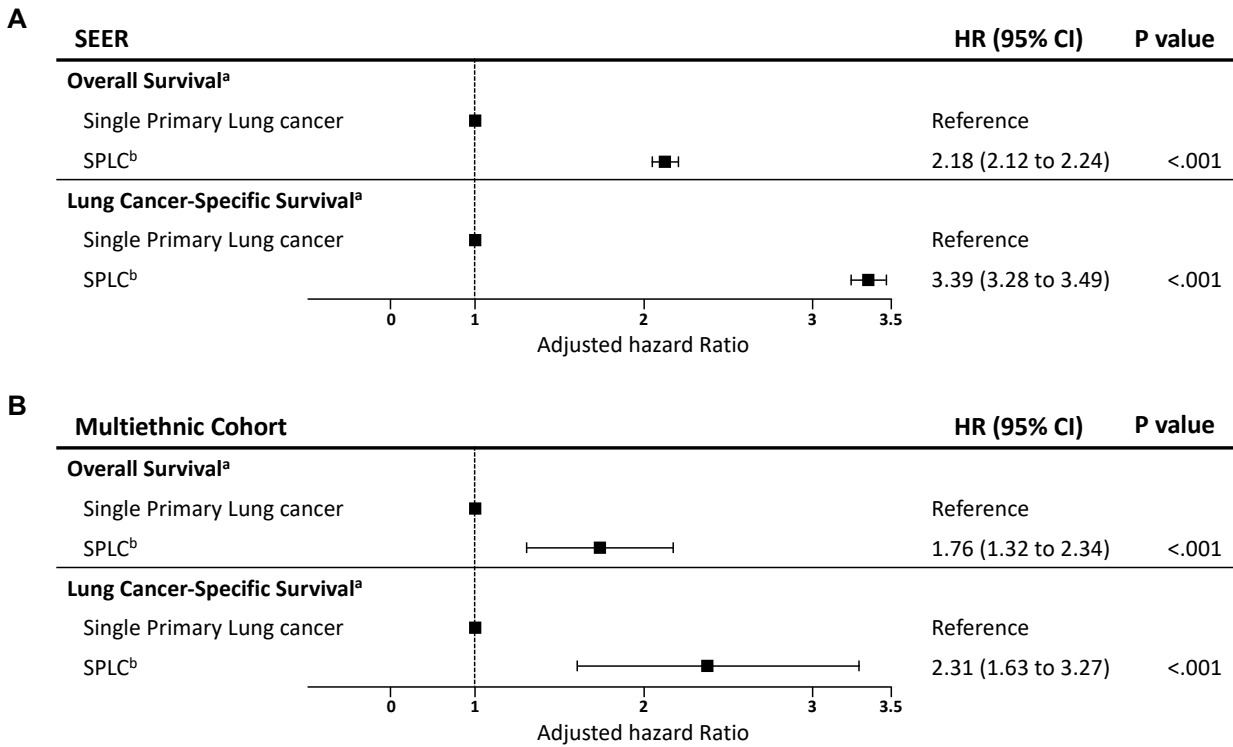

.

Supplementary Figure 5. Stratified Analysis by IPLC Histology: Adjusted Survival Curves for Overall Mortality among Patients with SPLC[a] versus Single Primary Lung Cancer in SEER [a]Overall mortality was estimated using multivariable Cox regression with time varying SPLC adjusting for sex, race, and age, stage and histology at IPLC. [b]Interaction was assessed between IPLC Stage and SPLC diagnosis on overall survival using a 2-sided likelihood ratio test. AD = adenocarcinoma; CI = confidence interval; HR = adjusted hazard ratio; IPLC = initial primary lung cancer; LC = large cell; NSCLC-NOS = non-small cell lung cancer/not otherwise specified; OTH = other; SC = small cell lung cancer; SEER = Surveillance, Epidemiology, and End Results Program; SPLC = second primary lung cancer; SQ = squamous cell.

Interaction *P* value[b] <.001

SC — HR for mortality in SPLC group, 1.43 (95% CI, 1.14-1.79)

LC — HR for mortality in SPLC group, 1.87 (95% CI, 1.65-2.12)

AD — HR for mortality in SPLC group, 2.06 (95% CI, 1.99-2.14)

SQ — HR for mortality in SPLC group, 2.16 (95% CI, 2.07-2.27)

NSCLC-NOS — HR for mortality in SPLC group, 2.04 (95% CI, 1.81-2.28)

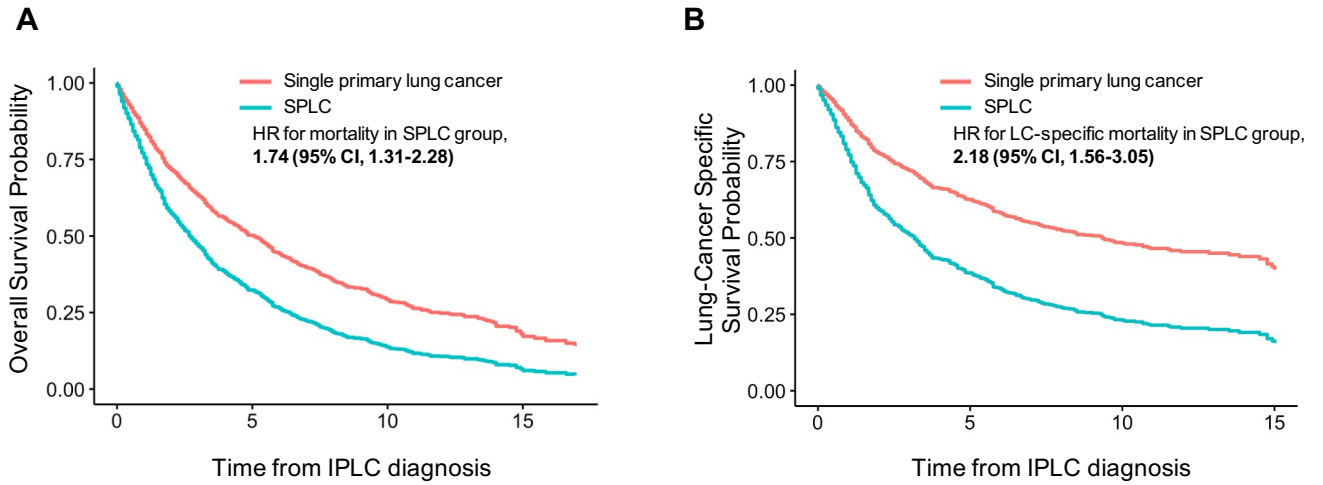OTH — HR for mortality in SPLC group, 2.40 (95% CI, 2.17-2.65)

Supplementary Figure 6. Sensitivity Analysis for Forest Plot of Association between Survival and SPLC diagnosis (versus Single Primary Lung Cancer) after Excluding Patients with Advanced-Stage IPLC in Multivariable Cox Regression in (A) SEER (N=133,445) and (B) MEC (N=1,050)[a]. [a]Overall and lung cancer-specific mortality was estimated using multivariable Cox regression adjusting for sex, race, and age, stage and histology at IPLC. [b]Time-varying predictor for overall and lung cancer-specific survival. Square symbols indicate the estimate of hazard ratio. Error bars indicate the 95% confidence intervals (CIs). CI = confidence interval; HR = adjusted hazard ratio; SPLC = second primary lung cancer.

A

SEER	HR (95% CI)	P value
Overall Survival[a]		
Single Primary Lung cancer	Reference	
SPLC[b]	2.18 (2.12 to 2.24)	<.001
Lung Cancer-Specific Survival[a]		
Single Primary Lung cancer	Reference	
SPLC[b]	3.39 (3.28 to 3.49)	<.001

Adjusted hazard Ratio

B

Multiethnic Cohort	HR (95% CI)	P value
Overall Survival[a]		
Single Primary Lung cancer	Reference	
SPLC[b]	1.76 (1.32 to 2.34)	<.001
Lung Cancer-Specific Survival[a]		
Single Primary Lung cancer	Reference	
SPLC[b]	2.31 (1.63 to 3.27)	<.001

Adjusted hazard Ratio

Supplementary Figure 7. Adjusted Survival Curves for Overall and Lung Cancer-Specific Mortality among Patients with SPLC[a] versus Single Primary Lung Cancer in the MEC

[a]Overall mortality (A) and lung cancer-specific mortality (B) was estimated using multivariable Cox regression with time varying SPLC adjusting for sex, race, and age, stage and histology at IPLC. CI = confidence interval; HR = adjusted hazard ratio; IPLC = initial primary lung cancer; MEC = Multiethnic Cohort Study; SPLC = second primary lung cancer.

A

Overall Survival Probability

— Single primary lung cancer
— SPLC

HR for mortality in SPLC group,
1.74 (95% CI, 1.31-2.28)

Time from IPLC diagnosis

B

Lung-Cancer Specific Survival Probability

— Single primary lung cancer
— SPLC

HR for LC-specific mortality in SPLC group,
2.18 (95% CI, 1.56-3.05)

Time from IPLC diagnosis

Supplementary Figure 8. Stratified Analysis by Smoking Status at Initial Diagnosis: Adjusted Survival Curves for Overall among Patients with SPLC[a] versus Single Primary Lung Cancer, Stratified by Smoking Status, in the MEC [a]Overall mortality was estimated using multivariable Cox regression with time varying SPLC adjusting for sex, race, and age, stage and histology at IPLC. [b]Interaction was assessed between smoking status and SPLC diagnosis on overall survival using a 2-sided likelihood ratio test. CI = confidence interval; HR = adjusted hazard ratio; IPLC = initial primary lung cancer; MEC = Multiethnic Cohort Study; SPLC = second primary lung cancer.