Small-cell Lung Cancer in Very Elderly (≥ 80 Years) Patients

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Abstract

This study found that the survival of very elderly (≥ 80 years) patients with small-cell lung cancer was associated with stage, performance status, and treatment option. Very elderly patients with small-cell lung cancer are a growing patient population who have not been previously reported on. Future progress will require trials specific to the elderly, integration of immunotherapy, greater supportive care, better geriatric assessment, and less toxic regimens.

Background: This analysis was performed to describe the outcome of very elderly (≥ 80 years) patients with small-cell lung cancer (SCLC) as there is no published data regarding these patients. **Materials and Methods:** One hundred forty-six very elderly patients with SCLC were identified from the Institutional Lung Cancer Database ranging in age from 80 to 92 years (median, 82 years). Of these, 47 (32%) patients had limited-stage SCLC (L-SCLC), and 99 (68%) had extensive-stage SCLC (E-SCLC). All were Caucasian, and the majority (64%) were female. Sixty-seven (46%) patients had Zubrod performance status (PS) of 0 to 1. **Results:** Of the 146 patients, 44 (30%) received no therapy, 65 (45%) received chemotherapy alone, 27 (19%) received chemotherapy plus local therapy (thoracic radiotherapy [TRT] or surgery), and 10 (7%) received local therapy alone. The median survival was 5.4 months. On univariable analysis, age ($P = .019$), stage (L-SCLC vs. E-SCLC; $P = .0002$), PS ($P < .0001$), and treatment option ($P < .0001$) were associated with survival. On multivariable analysis, stage ($P = .011$), PS ($P = .029$), and treatment option ($P < .0001$) maintained significance. For entire cohort, the median survival was 1.3 months without active therapy, 6 months with local therapy alone, 7.2 months with chemotherapy alone, and 14.4 months with chemotherapy plus local therapy ($P < .0001$, univariable and multivariable). Similar survival findings in response to treatment were found when the L-SCLC and E-SCLC cohorts were separately analyzed. **Conclusions:** The survival of very elderly patients with SCLC was associated with stage (L-SCLC vs. E-SCLC), PS, and treatment option. Very elderly patients with SCLC often have limited functional reserve required to tolerate aggressive multimodality therapy but appeared to benefit from it. Geriatric assessments, careful monitoring, and extra support are warranted in elderly patients. Care should be individualized based on the desires and needs of each patient.

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Introduction

Lung cancer is the leading cause of cancer deaths, worldwide. In 2018, there was an estimated 1.8 million deaths from lung cancer.[1] Approximately 13% to 15% of lung cancers are small-cell lung cancer (SCLC), and of these, about two-thirds are extensive-stage SCLC (E-SCLC), and one-third are limited-stage SCLC (L-

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Table 1 Patient Characteristics

	Limited (N = 47), n (%)	Extensive (N = 99), n (%)	Total (N = 146), n (%)	*P* Value
Age at Diagnosis				.6794
Median	82.0	82.0	82.0	
Range	80.0-92.0	80.0-91.0	80.0-92.0	
Gender				.1150
Male	21 (44.7)	31 (31.3)	52 (35.6)	
Female	26 (55.3)	68 (68.7)	94 (64.4)	
Cigarette Smoking Status				.4140
Never smoker	2 (4.3)	3 (3.0)	5 (3.4)	
Former smoker	26 (55.3)	66 (66.7)	92 (63.0)	
Current smoker	19 (40.4)	30 (30.3)	49 (33.6)	
Pack-years (Ever Smokers)				.6541
Median	50.0	50.0	50.0	
Range	8.0-126.0	3.0-163.0	3.0-163.0	
Performance Status				.0078
0	14 (29.8)	12 (12.1)	26 (17.8)	
1	12 (25.5)	29 (29.3)	41 (28.1)	
2	11 (23.4)	16 (16.2)	27 (18.5)	
3	10 (21.3)	41 (41.4)	51 (34.9)	
4	0 (0.0)	1 (1.0)	1 (0.7)	
History of Another Lung Cancer				.9659
No	46 (97.9)	97 (98.0)	143 (97.9)	
Yes	1 (2.1)	2 (2.0)	3 (2.1)	
Lung Treatment				<.0001
No active treatment	9 (19.1)	35 (35.4)	44 (30.1)	
Chemotherapy only[b]	13 (27.7)	52 (52.5)	65 (44.5)	
Chemotherapy[b] and local therapy[a]	20 (42.6)	7 (7.1)	27 (18.5)	
Local therapy only[a]	5 (10.6)	5 (5.1)	10 (6.8)	
Radiation Location				.0001
No radiation	26 (55.3)	74 (74.7)	100 (68.5)	
Chest radiation only	17 (36.2)	11 (11.1)	28 (19.2)	
Chest and brain radiation	3 (6.4)	0 (0.0)	3 (2.1)	
Chest and other radiation	1 (2.1)	0 (0.0)	1 (0.7)	
Brain radiation only	0 (0.0)	11 (11.1)	11 (7.5)	
Other radiation only[c]	0 (0.0)	3 (3.0)	3 (2.1)	

[a]Local therapy denotes either thoracic radiotherapy to the chest or resection.
[b]Eighty percent of those who received chemotherapy received a platinum-based doublet and a median of 4 cycles of therapy. Agents administered included various combinations of carboplatin, cisplatin, docetaxel, etoposide, topotecan, Adriamycin, cytoxan, vincristine, pemetrexed, gemcitabine, oxaliplatin, and paclitaxel.
[c]Other includes various sites of bone metastases with some patients receiving more than 1 course of radiotherapy.

Table 2 Elderly Patients With SCLC With Treatment by PS

	0-1 (N = 67), n (%)	2+ (N = 79), n (%)	Total (N = 146), n (%)	*P* Value
Lung Treatment				<.0001
No active treatment	8 (11.9)	36 (45.6)	44 (30.1)	
Chemotherapy only	37 (55.2)	28 (35.4)	65 (44.5)	
Chemotherapy and local therapy	19 (28.4)	8 (10.1)	27 (18.5)	
Local therapy only	3 (4.5)	7 (8.9)	10 (6.8)	

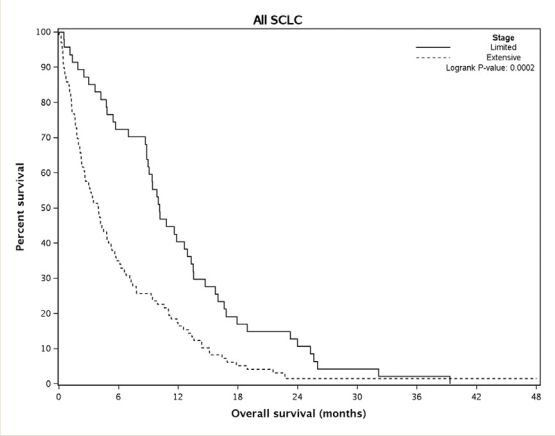
Abbreviations: PS = Performance status; SCLC = small-cell lung cancer.

Table 3 Univariate and Multivariate[a] Survival Analyses for Elderly Patients With SCLC

Variable	N	Events, n (%)	Median Survival, mos (95% CI)	2-Year Survival, % (95% CI)	Log-rank *P* Value	Cox Univariate Hazard Ratio (95% CI)	Cox Multivariate Hazard Ratio (95% CI)[a]	Cox Multivariate Likelihood Ratio *P* Value (n = 146)[a]
All Patients								
All	146	144 (99)	5.4 (4.2-7.4)	4.6 (1.1-8.1)		–		
Age at Diagnosis, Y					.0192			.1663
80-84	112	110 (98)	5.7 (4.2-8.8)	6.0 (1.5-10.5)		–	–	
85+	34	34 (100)	3.9 (1.9-6.7)	0.0 (0.0-0.0)		1.59 (1.07-2.36)	1.36 (0.89-2.09)	
Gender					.6830			
Male	52	51 (98)	5.6 (3.1-9.0)	4.0 (0.0-9.3)		–		
Female	94	93 (99)	5.4 (3.9-8.7)	5.1 (0.6-9.6)		0.93 (0.66-1.31)		
Current Cigarette Smoker					.3236			
No	97	96 (99)	5.4 (4.1-7.2)	2.5 (0.0-5.8)		–		
Yes	49	48 (98)	5.6 (3.2-11.9)	8.4 (0.5-16.3)		0.84 (0.59-1.19)		
Pack-years					.8593			
0-50	73	72 (99)	6.1 (4.8-8.8)	5.6 (0.3-10.9)		–		
>50	61	60 (98)	4.2 (3.0-9.4)	4.4 (0.0-9.8)		1.03 (0.73-1.46)		
Stage					.0002			.0112
Limited	47	47 (100)	10.1 (8.8-12.9)	10.6 (1.8-19.5)		–	–	
Extensive	99	97 (98)	4.0 (2.6-5.0)	1.5 (0.0-4.3)		1.95 (1.36-2.79)	1.66 (1.11-2.48)	
Performance Status					<.0001			.0293
0-1	67	67 (100)	9.3 (5.7-12.6)	9.0 (2.1-15.8)		–	–	
2+	79	77 (97)	3.0 (2.2-4.8)	0.0 (0.0-0.0)		2.38 (1.67-3.39)	1.55 (1.05-2.30)	
Lung Treatment					<.0001			<.0001
No active treatment	44	44 (100)	1.3 (1.0-2.1)	0.0 (0.0-0.0)		–	–	
Chemotherapy only	65	63 (97)	7.2 (5.0-9.9)	2.1 (0.0-6.0)		0.18 (0.12-0.27)	0.21 (0.13-0.34)	
Chemotherapy and local therapy	27	27 (100)	14.4 (9.4-17.8)	18.5 (3.9-33.2)		0.07 (0.04-0.13)	0.12 (0.06-0.24)	
Local therapy only	10	10 (100)	6.0 (1.5-10.2)	0.0 (0.0-0.0)		0.31 (0.15-0.63)	0.37 (0.18-0.79)	

Abbreviations: CI = confidence interval; SCLC = small-cell lung cancer.
[a]All covariates significant ($\alpha \leq .1$) in univariate analysis were used in the multivariate model.

Figure 1 Survival by Stage for all Elderly Patients With SCLC



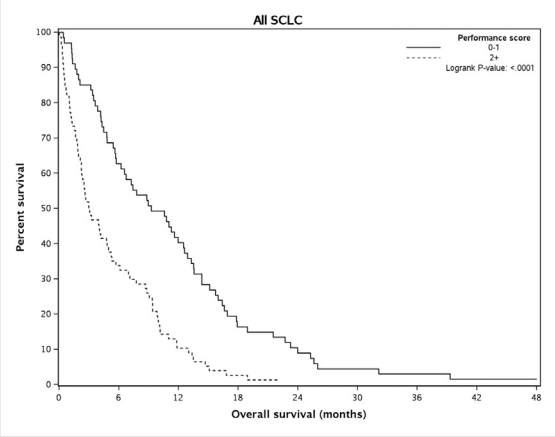
Abbreviation: SCLC = small-cell lung cancer.

SCLC).[2] Lung cancer is generally a disease of the elderly, with the average age at diagnosis of 70 years.[3] We performed this study to describe the treatment and outcome of patients with SCLC who are ≥ 80 years of age. Elderly patients are often frail with multiple comorbidities and are more likely to suffer severe treatment-related toxicity than younger patients.[4,5] Yet the elderly are an expanding population, and clinicians will face more questions about how they are best treated. This study was performed because there are very little data available regarding very elderly patients with SCLC.

Methods and Materials

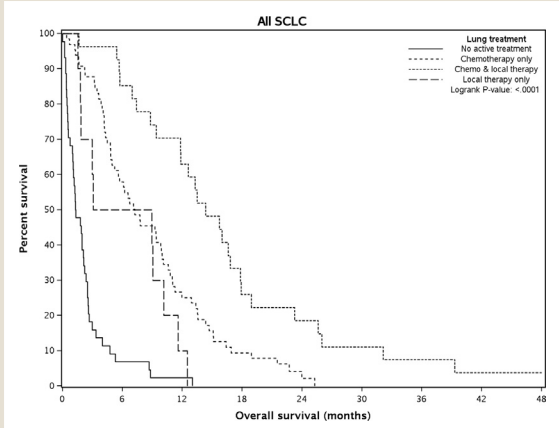
One hundred forty-six patients, all 80+ years of age, were identified from the Institutional Lung Cancer Database and retrospectively analyzed. Univariable summaries were tested with the χ^2, Kruskal-Wallis, and Wilcoxon rank sum tests as appropriate. Their diagnoses were made histologically between February 28, 1997 and

Figure 2 Survival by Performance Status for all Elderly Patients With SCLC



Abbreviation: SCLC = small-cell lung cancer.

Figure 3 Survival by Lung Treatment for all Elderly Patients With SCLC



Abbreviation: SCLC = small-cell lung cancer.

September 30, 2015. The date of diagnosis served as the reference point for this analysis. Survival was estimated with the Kaplan-Meier method. The survival of patient sub-groups were compared with the log-rank test, and those factors found to be significant were further analyzed with the Cox proportional hazards model. *P*-values less than .05 were considered significant.

Results

Patients ranged in age from 80 to 92 years (median, 82 years). Of these, 47 (32%) patients had L-SCLC, and 99 (68%) had E-SCLC. All were Caucasian, and the majority (64%) were female. Most were former (63%) or current (34%) smokers with a median smoking history of 50 pack-years. Sixty-seven (46%) patients had performance status (PS) ranging from 0 to 1 and the remaining patients had worse PS. Patient characteristics are shown in Table 1. In addition, it is important to note that there were significant differences in the therapy administered to patients with different performance scores ($P < .0001$) (Table 2).

Forty-four (30%) patients received no therapy, 65 (44.5%) patients received chemotherapy alone, 27 (18.5%) patients received chemotherapy plus local therapy (radiotherapy [RT] and/or surgery), and 10 (7%) patients received local therapy alone. Seventy-four (80%) of 92 patients who received chemotherapy were given platinum based-doublets. Patients who received chemotherapy were given a median of 4 cycles (range, 1-10 cycles) (see Table 1 for details).

Three (2%) patients had resection of thoracic disease, and 32 (22%) patients received thoracic RT (TRT). TRT included doses ranging from 20 Gy to 60 Gy (median, 45 Gy) in various fractionated regimens. During the course of their disease, 18 (12%) patients received RT to distant sites, including 2 (1%) patients who received prophylactic cranial irradiation (PCI). Non-thoracic sites received doses ranging from 8 Gy to 36 Gy (median, 30 Gy) in various fractionated regimens.

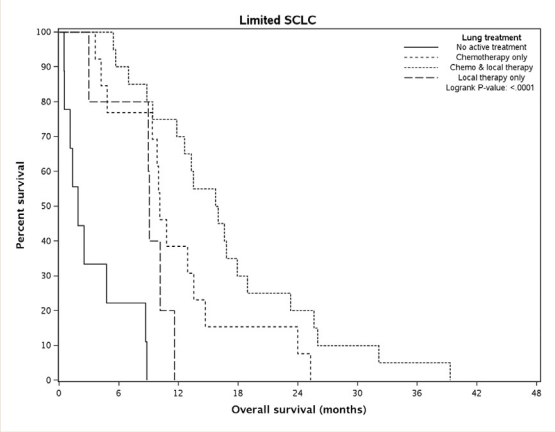
The date of diagnosis served as the reference point for this analysis, and patients were followed until death or from 3 to 22

Table 4 Univariate and Multivariate[a] Survival Analyses for Elderly Patients With Limited SCLC

Variable	N	Events, n (%)	Median Survival, mos (95% CI)	2-Year Survival, % (95% CI)	Log-rank *P* Value	Cox Univariate Hazard Ratio (95% CI)	Cox Multivariate Hazard Ratio (95% CI)	Cox Multivariate Likelihood Ratio *P* Value (n = 47)
Age at Diagnosis					.0063			.2962
80-84	33	33 (100)	12.6 (9.0-15.7)	15.2 (2.9-27.4)		–	–	
85+	14	14 (100)	8.8 (2.5-10.8)	0.0 (0.0-0.0)		2.51 (1.27-4.98)	1.51 (0.70-3.27)	
Gender					.9903			
Male	21	21 (100)	10.0 (7.0-13.5)	9.5 (0.0-22.1)		–		
Female	26	26 (100)	11.2 (5.7-13.5)	11.5 (0.0-23.8)		1.00 (0.56-1.80)		
Current Cigarette Smoker					.7521			
No	28	28 (100)	10.0 (8.7-11.8)	7.1 (0.0-16.7)		–		
Yes	19	19 (100)	12.6 (4.8-15.7)	15.8 (0.0-32.2)		0.91 (0.50-1.64)		
Pack-years					.1306			
0-50	24	24 (100)	10.9 (8.8-16.8)	16.7 (1.8-31.6)		–		
>50	19	19 (100)	9.8 (3.6-12.9)	5.3 (0.0-15.3)		1.61 (0.86-3.02)		
Performance Status					.0054			.2552
0-1	26	26 (100)	13.1 (8.8-16.6)	19.2 (4.1-34.4)		–	–	
2+	21	21 (100)	9.4 (4.8-10.1)	0.0 (0.0-0.0)		2.43 (1.28-4.62)	1.54 (0.74-3.21)	
Lung Treatment					<.0001			.0001
No active treatment	9	9 (100)	1.9 (0.5-8.7)	0.0 (0.0-0.0)		–	–	
Chemotherapy only	13	13 (100)	10.1 (4.8-13.5)	7.7 (0.0-22.2)		0.09 (0.03-0.26)	0.11 (0.04-0.35)	
Chemotherapy and local therapy	20	20 (100)	15.8 (9.4-18.9)	20.0 (2.5-37.5)		0.04 (0.01-0.13)	0.06 (0.02-0.20)	
Local therapy only	5	5 (100)	9.0 (3.0-11.6)	0.0 (0.0-0.0)		0.20 (0.06-0.68)	0.21 (0.06-0.75)	

Abbreviations: CI = confidence interval; SCLC = small-cell lung cancer.
[a]All covariates significant ($\alpha \leq .1$) in univariate analysis were used in the multivariate model.

Figure 4 Survival by Lung Treatment for Elderly Patients With Limited-Stage SCLC



Abbreviation: SCLC = small-cell lung cancer.

months (median, 12 months) in those alive at last follow-up evaluation. The median survival for the entire cohort was 5.4 months. On univariable analysis, age ($P = .019$), stage (L-SCLC vs. E-SCLC; $P = .0002$), PS (0-1 vs. 2+; $P < .0001$), and treatment option ($P < .0001$) were significantly associated with survival (Table 3). In multivariable analysis, stage ($P = .011$), PS ($P = .029$), and treatment option ($P < .0001$) maintained significance (Figures 1-3). The median survival for all patients was 1.3 months without active therapy, 6 months with local therapy alone, 7.2 months with chemotherapy alone, and 14.4 months with chemotherapy plus local therapy. In addition, almost all (94%) patients had significant comorbidities, which were not associated with survival ($P = .6$).

The subgroup of 47 patients with L-SCLC was analyzed separately and had a median survival of 10 months. On univariable analysis, age ($P = .006$), PS ($P = .005$), and treatment option ($P < .0001$) were significantly associated with survival. On multivariable analysis, only treatment option remained significant ($P = .0001$) (Table 4). The median survival for patients with L-SCLC was 1.9 months without active therapy, 9 months with local therapy alone, 10.1 months with chemotherapy alone, and 15.8 months with chemotherapy plus local therapy (Figure 4).

The subgroup of 99 patients with E-SCLC was also analyzed separately and had a median survival of 4 months. On univariable analysis, PS ($P < .0001$) and treatment option ($P < .0001$) were significantly associated with survival. On multivariable analysis, only treatment option ($P < .0001$) remained significantly associated with survival (Table 5). The median survival for patients with E-SCLC was 1.3 months without active therapy, 1.8 months with local therapy alone, 6.2 months with chemotherapy alone, and 11.9 months with chemotherapy plus local therapy (Figure 5).

Discussion

Very elderly patients with SCLC are difficult to treat for a number of reasons. They often have multiple comorbidities and poor PS. Aging decreases functional reserve, and elderly patients suffer more toxicity from combined modality therapy than younger patients.[4,5] Years of smoking contribute to pulmonary and cardiovascular disease. Standards of care are often based on randomized trials that, generally, lack patients who are 80+ years of age. Thus, the conclusions from these studies may not apply to very elderly patients. Limitations in our knowledge provided the rationale for performing this study to analyze a cohort of 80+-year-old patients with SCLC. One very interesting finding was that a large proportion (30%) of patients underwent no active treatment. There were likely concerns of toxicity, unknown efficacy, and limited life expectancies in these very old individuals. Patients who received no active therapy lived for a very short time (median, 1.3 months), reflecting the natural history of this disease when untreated. Those receiving aggressive treatment lived significantly longer, and patients who received both chemotherapy plus local therapy survived the longest regardless of whether they had L-SCLC or E-SCLC (Figures 3-5).

Our findings are consistent with the literature regarding the overall population of patients with SCLC. Chemotherapy has long been the standard treatment for patients with SCLC and was associated with improved survival in the elderly patients in the current study.[6]

Additionally, TRT is beneficial for patients with SCLC. Two meta-analyses of randomized trials have reported survival benefits for the addition of TRT to chemotherapy in patients with L-SCLC.[2,7] Both reported a significant 5.4% survival benefit associated with the administration of TRT. TRT has also been reported to enhance the survival of selected patients with E-SCLC. Jeremic performed a trial including patients with E-SCLC who had a complete response outside of the thorax and a partial response or complete response in the thorax following 3 cycles of chemotherapy. They were randomized to further chemotherapy or chemotherapy plus twice-daily TRT.[8] Patients who received TRT in addition to chemotherapy had significantly better survival than those who received chemotherapy alone (median survival time, 17 vs. 11 months; 5-year survival rate, 9.1% vs. 3.7%, respectively; $P = .04$). Slotman et al performed another TRT trial in patients with E-SCLC.[9,10] Patients first received 4 cycles of chemotherapy, and those having any favorable response were randomly assigned to either no TRT versus TRT. The 2-year overall survival was 13% versus 3% ($P = .004$), favoring TRT. However, this survival benefit was restricted to patients with residual disease in the thorax following chemotherapy.[10] Additionally, retrospective analyses of elderly patients with L-SCLC and E-SCLC report significantly better survival with the addition of TRT to chemotherapy.[11,12] The present study confirmed that both patients with L-SCLC and selected patients with E-SCLC treated with local therapy (mainly TRT) in addition to chemotherapy lived longer than those treated with either alone. This benefit appears independent of age as it was present in our very elderly cohort.

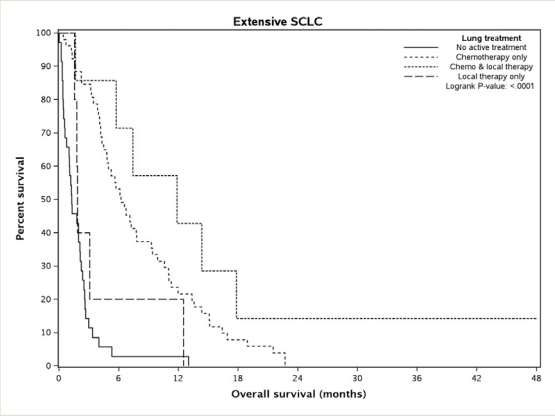
Historically, it appeared that PCI provided a survival benefit to patients with SCLC having favorable responses to therapy. Two meta-analyses of both patients with L-SCLC and E-SCLC, who participated in randomized trials of PCI versus no PCI reported a survival benefit for PCI in patients having complete responses to initial therapy.[13,14] However, there were only 2 (1.4%) patients in the current study who received PCI so we could not evaluate this aspect of treatment. There appeared to be hesitation on the part of

Table 5 Univariate and Multivariate[a] Survival Analyses for Elderly Patients With Extensive SCLC

Variable	N	Events, n (%)	Median, mos (95% CI)	2-Year Survival, % (95% CI)	Log-rank *P* Value	Cox Univariate Hazard Ratio (95% CI)	Cox Multivariate Hazard Ratio (95% CI)	Cox Multivariate Likelihood Ratio *P* Value (n = 99)
Age at Diagnosis					.0979			.2627
80-84	79	77 (97)	4.2 (3.1-5.7)	1.9 (0.0-5.4)		–	–	
85+	20	20 (100)	2.0 (1.0-5.0)	0.0 (0.0-0.0)		1.52 (0.92-2.49)	1.37 (0.80-2.33)	
Gender					.2478			
Male	31	30 (97)	3.1 (1.3-5.6)	0.0 (0.0-0.0)		–		
Female	68	67 (99)	4.1 (2.4-5.7)	2.9 (0.0-7.0)		0.77 (0.50-1.20)		
Current Cigarette Smoker					.8680			
No	69	68 (99)	4.1 (2.3-5.7)	0.0 (0.0-0.0)		–		
Yes	30	29 (97)	3.2 (1.9-5.6)	3.5 (0.0-10.4)		0.96 (0.62-1.50)		
Pack-years					.3325			
0-50	49	48 (98)	4.8 (2.7-6.1)	0.0 (0.0-0.0)		–		
>50	42	41 (98)	3.3 (2.1-4.8)	3.6 (0.0-9.9)		0.81 (0.52-1.25)		
Performance Status					<.0001			.0594
0-1	41	41 (100)	6.7 (4.3-11.0)	2.4 (0.0-7.2)		–	–	
2+	58	56 (97)	2.3 (1.6-3.3)	0.0 (0.0-0.0)		2.31 (1.51-3.53)	1.57 (0.98-2.51)	
Lung Treatment					<.0001			<.0001
No active treatment	35	35 (100)	1.3 (0.8-2.1)	0.0 (0.0-0.0)		–	–	
Chemotherapy only	52	50 (96)	6.2 (4.8-9.3)	0.0 (0.0-0.0)		0.18 (0.11-0.30)	0.22 (0.13-0.37)	
Chemotherapy and local therapy	7	7 (100)	11.9 (1.6-17.8)	14.3 (0.0-40.2)		0.10 (0.04-0.25)	0.14 (0.05-0.37)	
Local therapy only	5	5 (100)	1.8 (1.5-12.5)	0.0 (0.0-0.0)		0.43 (0.17-1.12)	0.45 (0.17-1.23)	

Abbreviations: CI = confidence interval; SCLC = small-cell lung cancer.
[a]All covariates significant ($\alpha \leq .1$) in univariate analysis were used in the multivariate model.

Figure 5 Survival by Lung Treatment for Elderly Patients With Extensive-Stage SCLC



Abbreviation: SCLC = small-cell lung cancer.

caregivers and patients for PCI within the present cohort. Recently, 2 PCI trials in patients with E-SCLC provided conflicting results.[15,16] Future studies will re-examine and clarify the controversial role of PCI for patients with ESCLC. The major weakness of this study was the retrospective nature with the potential for introducing bias. Also, this cohort reflects patients treated over a relatively long period of time. Patients who received no active therapy were likely thought to be unable to tolerate or benefit from therapy. Very elderly patients are under-represented in published studies. Thus, there is very little, if any, available data to aid in making rational treatment decisions for these patients. In the absence of prospective data, this report provides some of the only data available regarding patients with SCLC who are 80+ years old. The number of elderly patients with cancer will dramatically increase in the coming years as will dilemmas regarding their care. Thus, this analysis provides information to help one understand the care and outcome of very elderly patients with SCLC.

Although not employed in this study, immunotherapy will have an impact on the future care of patients with SCLC. IMpower 133 was a phase III trial for patients with E-SCLC that compared carboplatin plus etoposide followed by either atezolizumab or placebo.[17] The median survival was 12.3 months with atezolizumab versus 10.3 months with placebo (hazard ratio, 0.70; $P = .007$). The addition of atezolizumab to chemotherapy for patients with E-SCLC resulted in significantly better survival. Immunotherapy is being studied in patients with LSCLC as well, but no phase III data is available. Immunotherapy provides another treatment option with a relatively favorable toxicity profile for elderly patients.

The survival of very elderly (80+ years) patients with SCLC was associated with stage, PS, and treatment option. Although, these patients have comorbidities and limited functional reserve owing to advanced age, it appeared they benefit in terms of survival from more aggressive therapy as do younger individuals. Therefore, treatment appears generally advisable regardless of age, and multimodality therapy appeared best. However, taking these findings into consideration, care should be individualized based on the desires and needs of each patient. There are patients who choose not to receive aggressive therapy or are unfit for it based on their overall health. Good clinical judgement, experience, and personalizing care to the patient's individual needs, desires, and goals are critical. Future research should be specifically geared toward developing less toxic regimens. Geriatric assessments, careful monitoring, and extra support are warranted in elderly patients. Additionally, following the report of the IMpower 133 trial, immunotherapy will likely play an important role in SCLC therapy and should be studied in older patients.[17]

Clinical Practice Points

- Elderly patients with cancer are a rapidly growing group worldwide and yet, they are underrepresented in clinical trials. Therefore, there is a dramatic paucity of clinical data to help guide therapy for elderly patients with SCLC.
- This study features a fairly large cohort of very elderly (age $\geq$ 80 years) patients with SCLC who received a variety of treatments. Almost one-third of patients received no therapy. Patient survival was associated with stage, PS, and treatment option.
- The primary finding was that more aggressive therapy was associated with improved survival in this very elderly population. Although one may be hesitant to administer potentially toxic therapy to very elderly patients, they appeared to benefit from it.
- However, taking these findings into consideration, care should be individualized based on the desires and needs of each patient. Future progress will require trials specific to elderly patients, integration of immunotherapy, greater supportive care, better geriatric assessment, and less toxic regimens.

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Disclosure

The authors have stated that they have no conflicts of interest.

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