

# ACKGROUND

Small cell lung cancer (SCLC) is an aggressive malignancy, but with a high response rate to chemotherapy (CT). Performance status (PS) has been recognized as one of the main prognostic factors in SCLC. Early deaths and poor survival after CT were found to correlate with poor PS. There are few data about risk-benefit ratio of CT in PS 3 and 4 patients, although it has been often used. This study was performed to assess the clinical and laboratorial factors and the outcome of poor PS SCLC patients that received CT and best supportive care in our institution.

# TERIALS AND METHODS

A retrospective review of patients medical records with SCLC showing PS 3-4, who received systemic CT, was performed between January 2001 and December 2006 at Instituto Nacional do Cancer (INCA), Rio de Janeiro, Brazil.

# SULTS

- A total of 140 patients who had cytological or histological diagnosis of SCLC were evaluated. Patients with pretreatment PS 3 and 4 that received CT were selected for analysis. Forty patients (28.5%) were eligible.
- Clinical characteristics and treatment features are shown in Table 1. No brain metastases were detected in the group.
- Not all patients had response evaluation registered (30% missing data), but most of the evaluated cases had clinical response (47.5% partial response and 7.5% complete response).
- Median overall survival was only 53 days (64 days for PS 3 and 7 days for PS 4).
- > Results for univariate analysis are shown in Table 2.
- > PS 3 patients had better survival than PS 4 patients, even when adjusted for stage (Figure 1).
- Results for multivariate analysis are shown in Table 3.

# OUTCOME OF POOR PERFORMANCE STATUS SMALL CELL LUNG CANCER PATIENTS TREATED WITH CHEMOTHERAPY

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Characteristics	n (%)
Sex	
male	27 (67.5)
female	
Age median (range) - years	65 (46-82)
Stage	
limited disease	5 (12.5)
extensive disease	34 (85)
not evaluated	l (2.5)
ECOG PS	
3	30 (75)
4	10 (25)
Vena cava superior syndrome	10 (25)
Radiotherapy	18 (45)
CT regimen	
Cisplatin/etoposide	9 (22.5)
Carboplatin/etoposide	31 (77.5)
CT cycles median (range) - cycles	2.5 (1-6)
Death after 1 <sup>st</sup> CT cycle	12 (30)
Hospital admission	29 (72.5)
Mechanical ventilation	6 (15)
LDH median value (range) - U/I	636 (148-15930)

Table 2. Univariate analysis of clinical and treatment characteristics for overall survival

Characteristic	n
Sex	
male	27
female	13
Chemotherapy	
Cisplatin etoposide	9
Carboplatin etoposide	31
Radiotherapy	
Yes	18
No	22
1 <sup>st</sup> cycle hospital admission	
Yes	29
No	11
Superior vena cava	
syndrome	
Yes	10
No	30
Performance status <sup>1</sup>	
PS 3	30
PS 4	10
Stage	
Limited stage	5
Extensive stage	34
Stage + PS <sup>2</sup>	
Limited stage	5
Extensive stage + PS 3	24
Extensive stage + PS 4	10
Age	
= 65	20
> 65	20
LDH n=29	
= 480	10
> 480	19
Parformance status according to the FCOC	

Performance status according to the ECOG Performance status combined with stage (there were no patients with limited stage and Ps4)

Median		
survival	95% CI	p value
(days)		
		0.261
53	41.1-64.9	
33	0.0-96.4	
55	0.0 70.4	0.103
61	0.0-154.6	0.105
64 52		
53	36.7-69.3	0.00(
		0.006
75	27.2-122.8	
21	0.0-55.5	
		0.010
40	20.7-59-3	
191	107.7-274.3	
		0.508
		0.000
36	25.2-46.8	
53	32.9-73.1	
00	32.9-73.1	0.001
	0 0 1 0 7 1	0.001
64	0.9-127.1	
7	0.00-14.7	
		0.022
224	155.1-294.9	
40	20.6-59.4	
		< 0.001
224	153.1-294.9	
53	24.2-81.8	
7	0-14.7	
,	0 17.7	0.135
53	42.8-63.2	0.133
19	0.0-67.2	0.000
407		0.008
137	79.0-292.0	
47	18.6-75.4	



Model p-value <  $0.001 \text{ e r}^2 = 0.496$ 

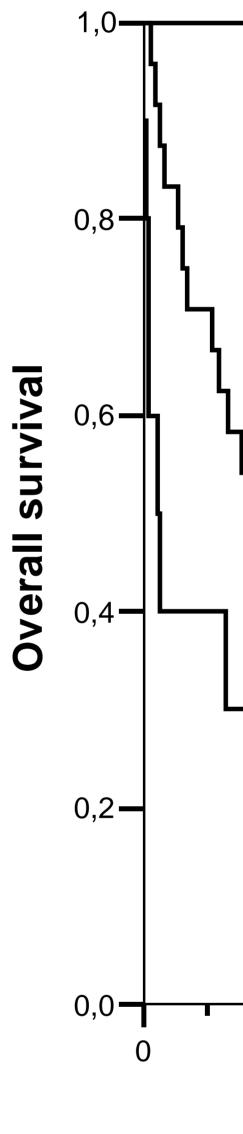


Figure 1- Overall survival of PS 3 and 4 SCLC patients stratified by extent of disease

# CONCLUSION

- short, with a high rate of early deaths.



Table 3. Multivariate analysis of clinical and treatment characteristics for overall survival

cteristic	p-value	HR	95% CI	
	0.005	3.313	1.441-7.614	
H <sup>2</sup>	< 0.001	2.863	1.610-5.088	
	0.224	1.028	0.984-1.074	

Variable considering interaction between Performance Status and Stage Logarithmic transformation of LDH value

> p<0.001 Extended disease **+** PS 3 (n=24) Limited disease + PS 3 (n=5) Extended disease + PS 4 (n=10) Time (months)

Our results show a major impact of poor PS on survival.

Median survival for PS 4 patients treated with standard chemotherapy was extremely

These data suggest that further studies are required to support the decision-making process on how to best treat this high-risk population.



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