

Supplementary File

Figure S1A. Survival by age group (no patient excluded)

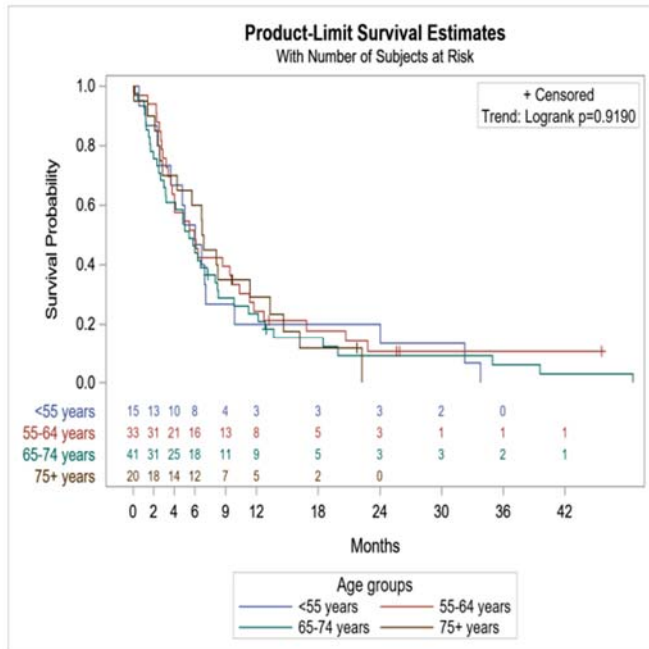


Figure 1B. Survival by number of intracranial (IC) metastases (no patients excluded)

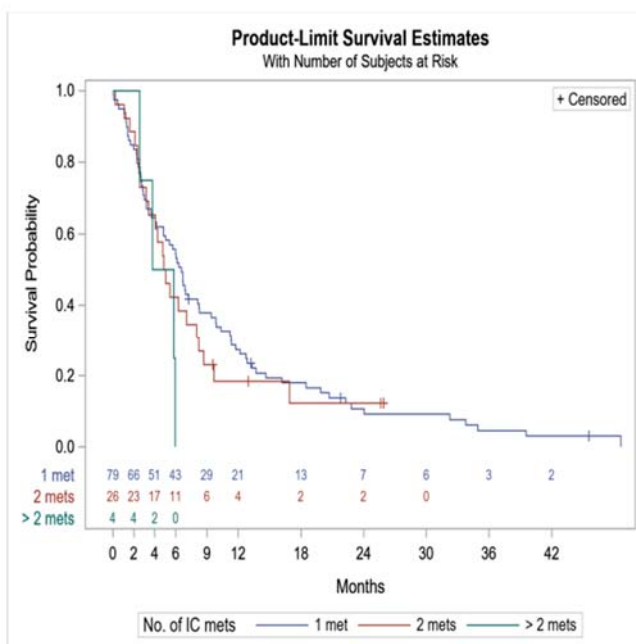


Figure 1C. Survival by metastatic burden (no patients excluded)

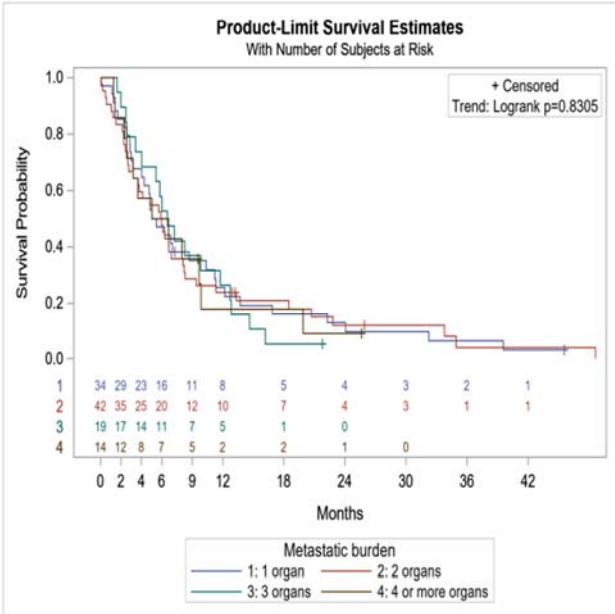


Figure 1D. Survival by planning target volume (PTV) group (no patients excluded)

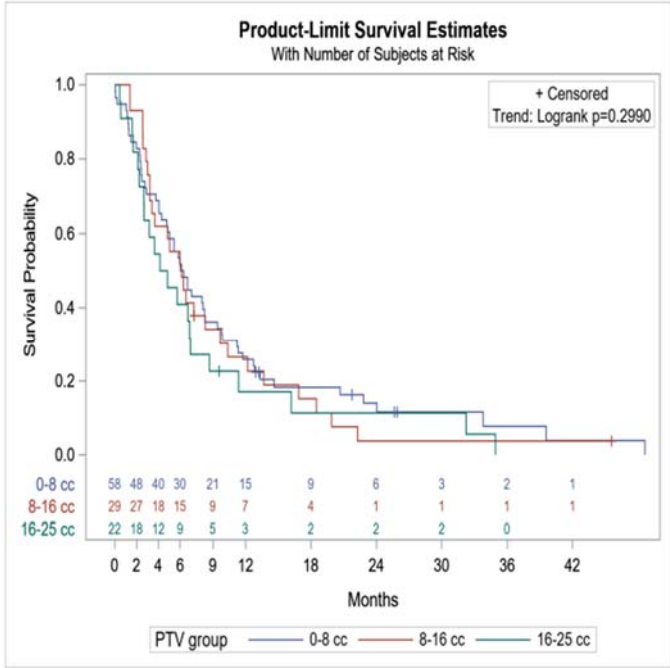


Figure 2. Survival by extracranial disease (no patients excluded)

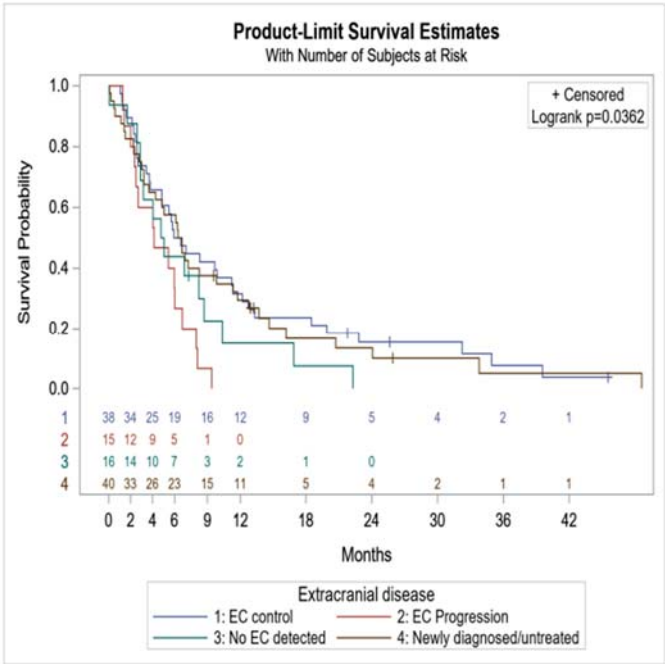


Figure 3. Survival by gender (all patients)

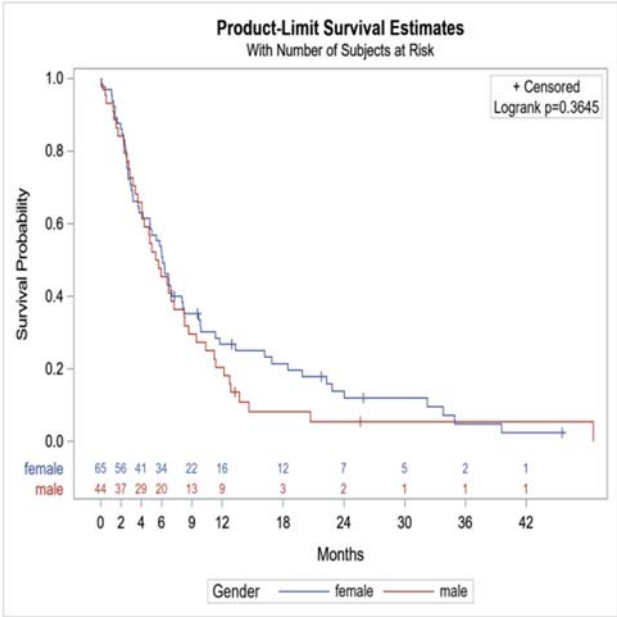


Figure 4A. Survival by tumour subtype (no patients excluded)

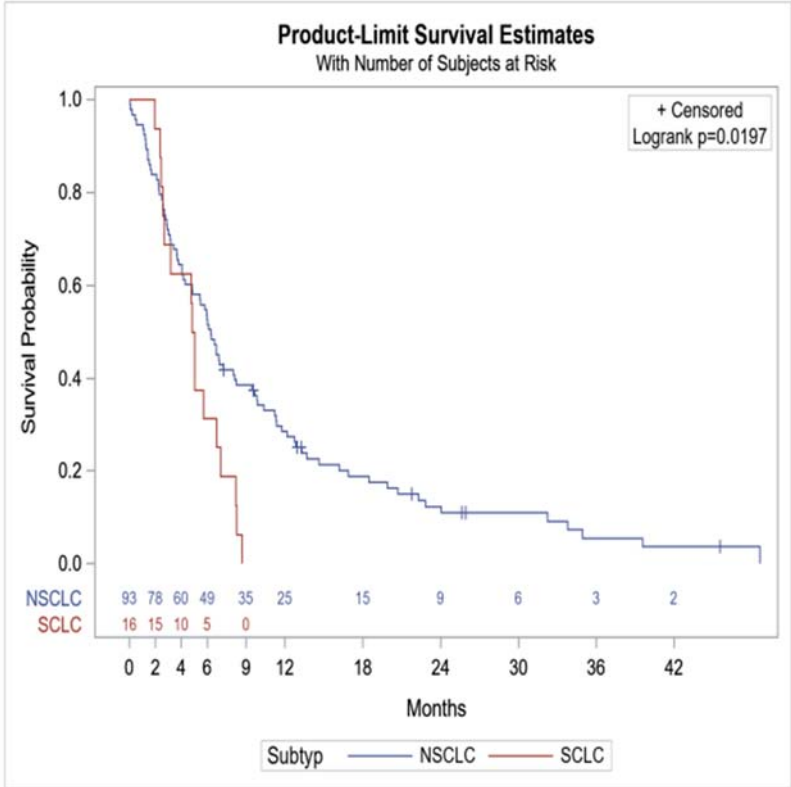


Figure 4B. Survival by dose per fraction (no patients excluded)

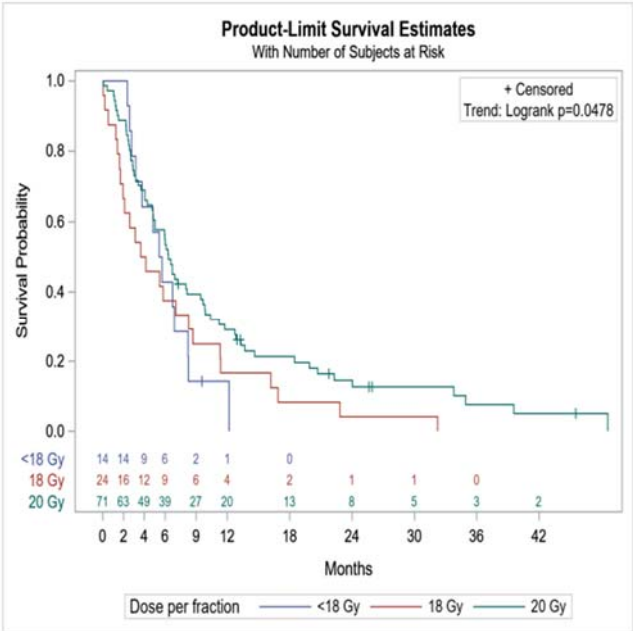


Table S1. Treatment-related toxicity

No of patients	Toxicity	Grade *
88	None	0
8 (3) (2) (1) (1) (1)	Headache Seizure Dizziness Lethargy Paresis	1
9 (3) (2) (2) (2)	Seizure Headache Paresis Dizziness	2
3 (1) (1) (1)	Seizure Headache Depressed level of consciousness	3
1	Intracranial hemorrhage	4

*By CTCAE v. 4.0

Table S2. Prognostic variables predicting toxicity

Variable	n missing	Value	n (%) of event	RR (95% of CI) of toxicity	p-value (univariate)	p-value (multivariate)
Age (RR per 10 units)	0	44– 55	< 3 (23.1%)			
		55– 65	< 9 (32.1%)			
		65– 75	< 6 (15.8%)			
		75–84	1 (6.7%)	0.71 (0.49– 1.05)	0.085	
PTV group	0	0–8 cc	9 (16.7%)			
		8–16 cc	4 (17.4%)			
		16–25 cc	6 (35.3%)	1.44 (0.90– 2.31)	0.13	
Dose per fraction	0	<1 Gy	8 4 (57.1%)			
		18 Gy	4 (20.0%)			
		20 Gy	11 (16.4%)	0.55 (0.34– 0.89)	0.016	
Previous cranial RT	0	No	10 (14.7%)			

		Yes	9 (34.6%)	2.35 (1.08– 5.13)	0.031	0.031
V12 minus GTV (RR per 10 units)	43	3– 10	< 3 (15.0%)			
		10– 21	< 3 (20.0%)			
		21– 31	< 1 (7.7%)			
		31–39	1 (33.3%)	1.05 (0.52– 2.12)	0.90	

Table S3. Descriptive statistics for the responses PD, CR, PR and SD and missing for patients with number of fractions = 1. Each n corresponds to 1 metastasis, thus patients with 2 metastases would contribute to the table twice

Variable	CR (n = 12)	PR (n = 40)	SD (n = 29)	PD (n = 16)	Missing data (n = 41)
Subtype					
SCLC	1 (5%)	6 (30%)	4 (20%)	2 (10%)	7 (35%)
NSCLC	11 (9%)	34 (29%)	25 (21%)	14 (12%)	35 (29%)
PTV volume [cc]	3,4 (0.7–6.7)	9.2 (0.6–23.4)	7.7 (0.7–22.2)	8.3 (1.2–19.7)	8.5 (1.1–25.9)
PTV group					
0–8 cc	11 (15%)	18 (24%)	16 (21%)	8 (10%)	23 (30%)
8–16 cc	0 (0%)	13 (35%)	9 (24%)	5 (14%)	10 (27%)
16–25 cc	0 (0%)	6 (33%)	2 (11%)	3 (17%)	7 (39%)

Dose per fraction					
< 18 Gy	1 (5%)	6 (29%)	3 (14%)	5 (24%)	6 (29%)
18 Gy	1 (3%)	11 (35%)	6 (19%)	0 (0%)	13 (42%)
20 Gy	10 (11%)	23 (26%)	20 (23%)	11 (13%)	23 (26%)
Smoking status					
Never	1 (7%)	6 (40%)	3 (20%)	2 (13%)	3 (20%)
Former	8 (12%)	23 (35%)	9 (14%)	9 (14%)	17 (26%)
On-going	2 (4%)	10 (20%)	16 (31%)	4 (8%)	19 (37%)