

**Supplementary**

**Table S1.** WBRT and boost RT dose schedules

WBRT dose	No. (%)	Boost RT dose	No. (%)
20 Gy/8 fractions	1 (3.8)		
24 Gy/8 fractions	1 (3.8)	15 Gy/5 fractions	1 (100)
25 Gy/10 fractions	14 (53.8)	15 Gy/3, 5, 6 fractions	7 (53.8)
		17.5 Gy/7 fractions	3 (23.1)
		20 Gy/8 fractions	1 (7.7)
		35 Gy/10 fractions (SIB)	1 (7.7)
		40 Gy/10 fractions (SIB)	1 (7.7)
27 Gy/12 fractions	1 (3.8)	38.4 Gy/12 fractions (SIB)	1 (100)
27.5 Gy/10 fractions	1 (3.8)	33 Gy/10 fractions (SIB)	1 (100)
28 Gy/14 fractions	1 (3.8)	42 Gy/10 fractions (SIB)	1 (100)
30 Gy/10 or 12 fractions	6 (23.1)	9 Gy/3 fractions	1 (33.3)
		15 Gy/3 fractions	1 (33.3)
		33 Gy/10 fractions (SIB)	1 (33.3)
37.5 Gy/15 fractions	1 (3.8)	7.5 Gy/3 fractions	1 (100)

WBRT, whole brain radiotherapy; SIB, simultaneous integrated boost

**Supplementary**

**Table S2.** Univariate and multivariate cox regression model for overall survival

	Overall survival					
	Univariate			Multivariate		
	HR	95% CI	p-value	HR	95% CI	p-value
Age (<65 yr)						
≥65 yr	3.36	1.69–6.68	0.001	5.37	2.19–13.16	<0.001
Sex (male)						
Female	1.13	0.55–2.34	0.736			
Pathology (adenoca)						
SCCa, other	1.36	0.59–3.14	0.477			
Systemic status (progression)			0.018			<0.001
Stable	0.54	0.13–2.36	0.417	0.01	0.00–0.16	0.001
NED	0.18	0.05–0.60	0.005	0.02	0.00–0.17	<0.001
Synchronous (synchronous)						
Metachronous	0.48	0.22–1.02	0.055	5.46	1.40–21.27	0.014
Brain metastasis diagnosis (new)						
Recurrent	6.14	1.93–19.52	0.002	94.43	13.63–654.38	<0.001
Number of metastasis (single)						
Multiple	1.72	0.87–3.41	0.119			
Maximum size of metastasis (<40 mm)						
≥40 mm	1.82	0.88–3.76	0.106	2.96	1.05–8.34	0.040
Location of metastasis (supratentorial)			0.146			
Infratentorial	1.16	0.52–2.58	0.712			
Both	8.33	0.99–69.87	0.051			
Surgery extent (residual)						
All removed	0.65	0.33–1.28	0.208			
GPA (0.0–1.0)			0.001			0.013
1.5–2.0	0.25	0.09–0.69	0.008	0.12	0.03–0.47	0.003
2.5–3.0	0.21	0.08–0.56	0.002	0.29	0.10–0.85	0.023
3.5–4.0	0.08	0.02–0.31	<0.001	0.19	0.04–0.79	0.023
Postop systemic treatment (none)			0.884			
Targeted Tx	0.87	0.30–2.49	0.792			
CTx without targeted Tx	1.11	0.53–2.33	0.788			
Postop treatment modality (observation)			0.669			
WBRT ± boost	1.27	0.59–2.75	0.547			
Local RT	0.85	0.35–2.05	0.720			

Adenoca, adenocarcinoma; SCCa, squamous cell carcinoma; NED, no evidence of disease; GPA, graded prognostic assessment; GTR, gross total removal; Tx, treatment; CTx, chemotherapy; WBRT, whole brain radiotherapy; RT, radiotherapy.