

Supplement 1. Univariate Analysis of Overall Survival and CNS Progression Free Survival for All Patients

Variable	CNS Progression Free Survival			Overall Survival		
	HR	P Value	95% CI	HR	P Value	95% CI
Age at Diagnosis						
<40	1			1		
≥40	1.08	0.82	0.54-2.18	2.09	<0.001	1.48-2.95
Gender						
Female	1			1		
Male	1.04	0.91	0.53-2.07	0.83	0.31	0.59-1.18
Leukemia Type						
CML/CLL	1			1		
ALL	0.75	0.50	0.33-1.72	0.61	0.04	0.39-0.98
AML	0.47	0.11	0.18-1.19	0.75	0.23	0.48-1.20
Pathology positive (CSF or biopsy)						
No	1			1		
Yes	1.81	0.22	0.71-4.65	0.91	0.65	0.61-1.36
Imaging positive (CT or MRI)						
No	1			1		
Yes	0.78	0.44	0.41-1.47	1.11	0.56	0.79-1.56
Stem cell transplant prior to RT						
No	1			1		
Yes	0.98	0.97	0.43-2.24	1.31	0.18	0.88-1.94
Bone Marrow positive at CNS diagnosis						
No	1			1		
Yes	1.45	0.29	0.73-2.88	0.72	0.06	0.51-1.02
Cranial nerve symptoms						
No	1			1		
Yes	3.17	0.004	1.44-7.02	2.10	<0.001	1.42-3.10
Any CNS symptoms						
No	1			1		
Yes	4.17	0.003	1.60-10.83	2.60	<0.001	1.65-4.10
Intrathecal Chemotherapy (Number of Cycles)						
None	1			1		
1-5	0.35	0.13	0.09-1.34	0.68	0.18	0.38-1.20
5-10	0.88	0.82	0.29-2.70	0.66	0.15	0.38-1.16

	10+	0.67	0.49	0.22-2.05	0.41	0.002	0.23-0.72
Radiation Therapy Type	Base of Skull	1			1		
	Whole Brain	0.51	0.07	0.24-1.07	0.86	0.45	0.57-1.28
	Craniospinal	0.44	0.05	0.19-0.99	0.73	0.15	0.47-1.13
Stem cell transplant after RT	No	1			1		
	Yes	0.31	0.00	0.15-0.63	0.26	<0.00	0.18-0.39
			1			1	

Abbreviations: CNS, Central Nervous System; HR, Hazard Ratio; CI, Confidence Interval; CN, Cranial Nerve; CSF, Central Spinal Fluid; CT, Computed Tomography; MRI, Magnetic Resonance Imaging; RT, Radiation Therapy