

Supplementary Table 4 Meta-regression for different covariates predicting outcomes.

GTR			
	Beta	SE	P-value
Age	-0.0042	0.009	0.65
Sex	0.8	0.46	0.082
Type	0.98	0.29	0.006*
Preoperative tumor volume	0.0026	0.0089	0.77
Knosp Grade	1.005	0.46	0.02*
Postoperative hypopituitarism			
	Beta	SE	P-value
Age	0.003	0.03	0.93
Sex	0.11	2.54	0.97
Type	-1.34	1.01	0.19
Preoperative tumor volume	0.14	0.05	0.003*
Knosp Grade	4.26	16.05	0.8
Diabetes insipidus			
	Beta	SE	P-value
Age	-0.012	0.02	0.65
Sex	-2.08	1.9	0.28
Type	-1.38	1.41	0.33
Preoperative tumor volume	0.03	0.13	0.82
Knosp Grade	0.78	2.6	0.76
Visual worsening			
	Beta	SE	P-value
Age	0.01	0.05	0.73
Sex	-0.31	2.53	0.9
Type	0.032	1.99	0.98
Preoperative tumor volume	0.11	0.28	0.7

Knosp Grade	2.27	3.7	0.54
Meningitis			
	Beta	SE	P-value
Age	-0.009	0.023	0.84
Sex	-0.1	1.22	0.93
Type	-0.2	1.45	0.88
Preoperative tumor volume	0.026	0.16	0.87
Knosp Grade	0.46	2.32	0.84
CSF leak			
	Beta	SE	P-value
Age	0.0074	0.02	0.71
Sex	0.71	1.11	0.52
Type	0.63	1.15	0.58
Preoperative tumor volume	-0.012	0.13	0.93
Knosp Grade	-0.68	2.6	0.8