

**Supplemental Table S1** Associations between sinus involvement and other factors

	No sinus involvement		Sinus involvement		<i>p</i> -Value
	<i>n</i>	%	<i>n</i>	%	
Skull base involvement ( <i>n</i> = 257)	27	18.1	37	34.3	0.004
Intracranial involvement ( <i>n</i> = 263)	6	3.9	9	8.3	0.177
Positive surgical margins ( <i>n</i> = 244)	25	21.9	49	37.7	0.008
Bony invasion ( <i>n</i> = 150)	17	20.2	33	50.0	< 0.001
Lymphovascular invasion ( <i>n</i> = 108)	5	7.1	3	7.9	1.000
Cartilage invasion ( <i>n</i> = 141)	3	3.8	16	25.8	< 0.001
Perineural invasion ( <i>n</i> = 114)	5	6.8	7	17.1	0.114
Angioinvasion ( <i>n</i> = 107)	5	7.0	3	8.3	1.000
Dural invasion ( <i>n</i> = 227)	2	1.8	5	4.3	0.446
Brain invasion ( <i>n</i> = 174)	1	0.9	2	2.9	0.561
Orbital invasion ( <i>n</i> = 208)	4	4.3	29	25.4	< 0.001