

Supplementary Table 1. Mean, Median, and Standard Error of Log IgE for Cases Taking Various Medications at the Time of Blood Draw, San Francisco Bay Area Adult Glioma Study (2001-2005)

Medication Category	Code	<u>Log IgE (Cases Only)</u>				<u>Log IgE (Controls Only)</u>			
		N	Mean	Median	Std Error	N	Mean	Median	Std Error
All participants who gave blood									
Chemotherapy drug or strong immunosuppressant (all)	1	62	2.9	2.8	0.2	3	2.6	2.9	0.5
Temodar (also included #1 above)	temodar	57	3.0	2.9	0.2	0	NA	NA	NA
HIV/AIDS drug	2	1	3.1	3.1	NA	3	1.9	1.9	0.7
Antibiotic or Antiviral with some immunologic effects	3	33	3.1	2.9	0.3	21	3.3	2.9	0.4
NSAID drug, antiInflammatory	4	39	3.2	3.6	0.2	69	3.5	3.5	0.2
Antihistamine, antileukotriene, or other allergy medication	5	18	4.0	3.9	0.4	23	3.5	3.8	0.4
Identity of drug is unclear, so no judgement was made	6	36	3.4	3.4	0.2	23	3.0	3.0	0.3
Drug likely not affecting immune system	7	351	3.3	3.2	0.1	238	3.4	3.4	0.1
Steroid medication (not inhaled)	8	166	3.3	3.1	0.1	4	3.6	3.6	0.8
Dexamethasone/Decadron only (also included in #8 above)	decadron	164	3.3	3.1	0.1	0	NA	NA	NA
Hormone replacement therapy	9	11	2.9	2.7	0.5	34	3.5	3.8	0.3
Oral contraceptives	10	6	4.3	3.9	0.7	22	3.4	3.4	0.4
Inhaled steroids	11	7	4.1	3.8	0.8	16	3.8	3.9	0.3
Inhaled beta 2 agonists or anti-muscarinic Ach recept	12	8	4.0	4.1	0.7	11	4.1	4.4	0.3
Topical antibiotics	13	5	2.7	3.0	0.5	0	NA	NA	NA
Inhaled antiInflammatory	14	0	NA	NA	NA	2	4.2	4.2	0.3
Topical corticosteroids	15	3	3.5	3.7	1.3	1	3.8	3.8	
TNF alpha inhibitor	16	1	3.9	3.9	NA	0	NA	NA	NA
INF inducer	17	1	5.1	5.1	NA	0	NA	NA	NA

Supplementary Table 2. Case-Control Odds Ratios for Total IgE (continuous) Stratified by Series, Age and Temodar Use, San Francisco Bay Area Adult Glioma Study (2001-2005)

Series 2										
Age group	Control	Case	p-value	odds ratio*						
All	289	226	0.000	0.73 (0.64 - 0.84)						
<52	91	117	0.014	0.76 (0.61 - 0.95)						
53-65	92	64	0.000	0.58 (0.45 - 0.76)						
>=66	106	45	0.232	0.87 (0.69 - 1.10)						
Series 3										
Age group	Control	All Cases	p-value	odds ratio*	Cases w/o temodar use	p-value	odds ratio*	Cases with temodar use	p-value	odds ratio*
All	470	393	0.015	0.89 (0.82 - 0.98)	134	0.847	0.99 (0.86 - 1.13)	224	<0.001	0.82 (0.73 - 0.91)
<=52	203	196	0.141	0.90 (0.79 - 1.03)	76	0.703	1.04 (0.86 - 1.24)	103	0.007	0.79 (0.67 - 0.94)
53-65	141	128	0.020	0.82 (0.69 - 0.97)	31	0.680	0.94 (0.70 - 1.26)	83	0.015	0.79 (0.65 - 0.96)
>=66	126	69	0.748	0.97 (0.80 - 1.17)	27	0.704	0.94 (0.70 - 1.27)	38	0.386	0.90 (0.71 - 1.14)
*Odds ratios are for each unit of increase in the natural log of the total IgE level.										
*Odds ratios adjusted for age, gender, ethnicity, college education and smoking history.										

Supplementary Table 3. Case-Control Odds Ratios for Total IgE (continuous) Stratified by Series, Time Between Diagnosis and Blood Draw and Temodar Use, San Francisco Bay Area Adult Glioma Study (2001-2005)

	Series 2					Series 3							
	Control		Case		p-value	Control		Case		p-value	OR (95% CI)*		
	N	Med ln(IgE)	N	Med ln(IgE)		N	Med ln(IgE)	N	Med ln(IgE)				
All cases and controls													
All	289	3.46	226	2.93	<0.001	0.73 (0.64 - 0.84)	470	3.46	393	3.2	0.015	0.89 (0.82 - 0.98)	
No Temodar given								134	3.36	0.847	0.99 (0.86 - 1.13)		
Treated with Temodar								224	2.97	<0.001	0.82 (0.73 - 0.91)		
Blood drawn ≤30 days after dx													
All							470	3.46	100	3.79	0.070	1.15 (0.99 - 1.33)	
No Temodar given									36	3.72	0.137	1.19 (0.95 - 1.50)	
Treated with Temodar									56	3.79	0.251	1.12 (0.92 - 1.35)	
Blood drawn 31-60 days after dx													
All	289	3.46	11	2.07	0.005	0.43 (0.24 - 0.77)	470	3.46	75	3.22	0.086	0.86 (0.72 - 1.02)	
No Temodar given									27	3.22	0.209	0.84 (0.63 - 1.11)	
Treated with Temodar									43	2.98	0.261	0.88 (0.71 - 1.10)	
Blood drawn >60 days after dx													
All	289	3.46	215	2.97	<0.001	0.75 (0.65 - 0.85)	470	3.46	218	2.96	<0.001	0.80 (0.71 - 0.89)	
No Temodar given									470	71	3.18	0.547	0.95 (0.80 - 1.13)
Treated with Temodar									470	125	2.61	<0.001	0.68 (0.59 - 0.78)

*Odds ratios are for each unit of increase in the natural log of the total IgE level.

*Odds ratios adjusted for age, gender, ethnicity, college education and smoking history.

Supplementary Table 4: IgE and Flow Cytometry cell counts for serial blood specimens obtained over a one month period for a glioblastoma patient on temozolomide treatment, days 1-5 on, days 6-28 off.

Day in treatment cycle	IgE	CD8 ¹	CD4+Foxp3 ²	CD4 ¹
day 0	30.9	17.29	6.36	21.15
day 3	29.4	25.87	4.68	21.22
day19	30.9	17.13	9.38	17.45
day 23	28.2	26.53	5.78	22.67
day 25	32.2	13.71	6.39	14.79
day 26	32.9	15.36	6.68	18.77

Cells were gated on ¹total lymphocytes, or ²total CD4+ cells