

Additional file 1 – Effects in breast cancer susceptibility of combined genotypes between two polymorphisms within the same gene.

Interactions	Genotypes	Controls	Cases	All cases			
<i>MSH3</i> Ala1045Thr (A>G) / <i>MSH3</i> Arg940Gln (G>A)		n (%)	n (%)	Crude OR (95% CI)	P value	Adjusted OR (95% CI) ^a	P value
	AA/GG	246 (45.2%)	120 (42.0%)	1 (Reference)	0.56	1 (Reference)	0.63
	AA/AG						
	AG/AA	24 (4.4%)	17 (5.9%)	1.45 (0.75-2.81)	0.27	1.47 (0.75-2.87)	0.26
	GG/GG						
	GG/AA						
	AG/GG	116 (21.3%)	54 (18.9%)	0.95 (0.65-1.41)	0.81	1.03 (0.69-1.53)	0.88
	AG/AG	123 (22.6%)	75 (26.2%)	1.25 (0.87-1.79)	0.23	1.26 (0.87-1.82)	0.23
	GG/AG	35 (6.4%)	20 (7.0%)	1.17 (0.65-2.12)	0.60	1.22 (0.67-2.24)	0.52
<i>MSH4</i> Asn914Ser (G>A) / <i>MSH4</i> Ala97Thr (A>G)		Controls n (%)	Cases n (%)	Crude OR (95% CI)	P value	Adjusted OR (95% CI) ^a	P value
	GG/GG	230 (42.2%)	133 (46.5%)	1 (Reference)	0.56	1 (Reference)	0.46
	AA/GG						
	AG/AG	19 (3.5%)	13 (4.5%)	1.18 (0.57-2.47)	0.66	1.12 (0.53-2.38)	0.77
	AG/GG	30 (5.5%)	11 (3.8%)	0.63 (0.31-1.31)	0.22	0.60 (0.29-1.25)	0.17
	GG/AA	46 (8.4%)	24 (8.4%)	0.90 (0.53-1.55)	0.71	0.99 (0.57-1.72)	0.98
	GG/AG	220 (40.4%)	105 (36.7%)	0.83 (0.60-1.13)	0.23	0.80 (0.58-1.11)	0.18

^a ORs were adjusted for: age at diagnosis (≤30, 31–49, 50–69, and ≥70 years), the lower age group being the referent class; alcohol consumption (never, social, and regular drinkers), never drinkers being the referent group; and smoking habits (smokers/non-smokers), non-smokers being the referent group.

P values are adjusted by unconditional multiplicative logistic regression.